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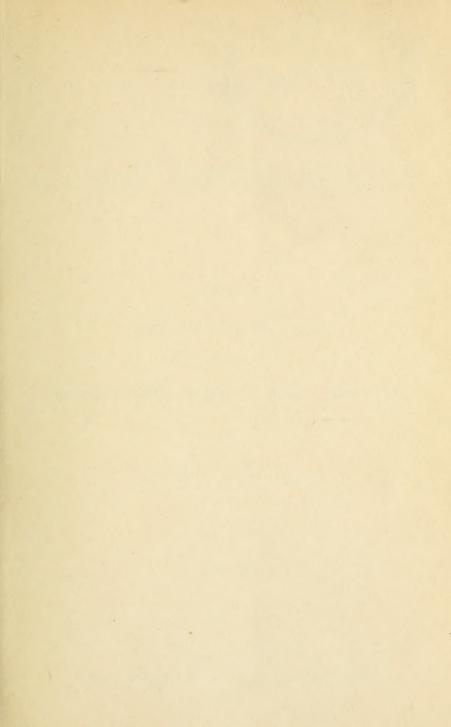
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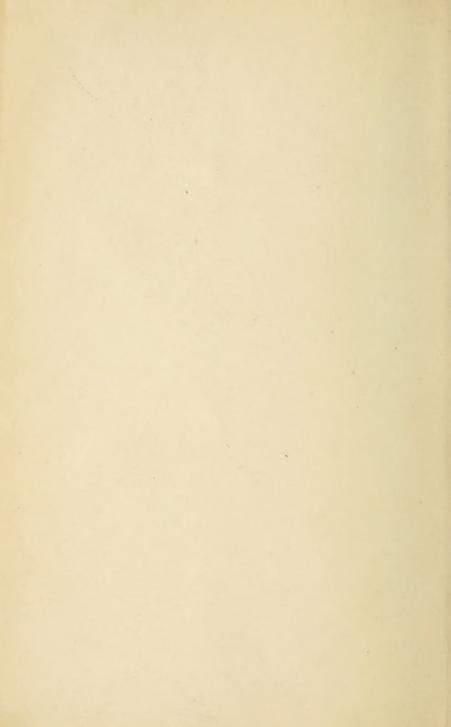
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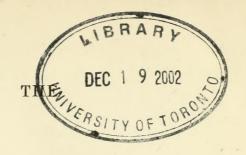




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GLASGOW MEDICAL JOURNAL.

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GLASGOW MEDICAL JOURNAL.

No. I. JANUARY, 1879.

ORIGINAL ARTICLES.

THE DIAGNOSIS OF ALCOHOLIC COMA.*

By WILLIAM MACEWEN, M.D., Surgeon and Lecturer on Clinical Surgery, Royal Infirmary, Casualty Surgeon, Glasgow, &c.

Gentlemen,—I wish to draw your attention to a subject which has been of considerable interest to me, and which I hope will commend itself to you. It is one which has a social, as well as a markedly medical, aspect, and affects alike the physician and

surgeon.

The medical journals and the ordinary newspapers contain, from time to time, paragraphs detailing instances of mistakes having been made by surgeons in determining the causation of insensibility. Thus, many persons have been pronounced to be suffering from alcoholic intoxication who, in reality, were affected by something more serious, such as concussion of the brain, fracture of the skull, opium poisoning, apoplexy, &c. The consequences of these mistakes have been very serious and often fatal, and many are the censorious remarks which have been levelled at those unfortunate enough to have made them. It is naturally asked, To what are these mistakes due? Though there are, no doubt, cases in which the mistakes have been justly attributed to the negligence of the surgeon, I am yet inclined to believe that the great majority of these mishaps have been due to the

*Being the principal part of an Introductory Address delivered at the opening of the Glasgow Royal Infirmary School of Medicine, Session 1878.

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obscurity of the subject, to the lack of information, and to some erroneous items supplied in medical works. Many men. of the highest professional standing, have written with the view of elucidating this subject, and though much has been done, it still remains, in some very important points, as obscure as before. This seems chiefly due to the fact that they have attacked it from one side only. A surgeon deals with the difficulty by pointing out the chief features in concussion of the brain and fracture of the skull; a physician, the principal points of apoplexy and opium poisoning, and these are clear enough by themselves; but as soon as they attempt to deal with the differential diagnosis between these states and alcoholic coma, you perceive that they enter a field, as far as the alcoholic coma is concerned, which is mainly unknown to them. As long as the diagnosis of alcoholic coma remains in doubt, one cannot differentiate between it and other states of insensibility. If an advance is to be made, alcoholic coma must first be dealt with, and if its characters are pointed out with sufficient distinctness, it will go a great way toward preventing those unfortunate mistakes which have so often been made, for they have mostly turned on the question, Is this person suffering from alcoholic coma or is he not? Even if you are able to state that a given insensible person is not suffering from alcoholic coma, then his state arises from a something which demands treatment in the wards of an hospital, or medical supervision elsewhere, and, in deciding to place him in such a position, you remove him from the danger of neglect, and afford an opportunity for that important element, time, to aid by the development of fresh data.

In proceeding to deal with this question, attention is naturally directed toward the literature of the subject, and without going into detail, I would briefly draw your attention to the

sayings of two living authors.

A certain widely known and respected surgeon recently delivered a lecture on head injuries, in which he says:—"It is very important, indeed, to determine when a man is simply drunk, although he may be 'dead drunk.' It is usually not very difficult to make the diagnosis. His friends know what has occurred to him, and he smells strongly of drink, and is in that helpless condition which you see if a person is suffering from alcoholic poisoning. . ." The professor goes on next to discuss the diagnosis when the case is complicated by head injury, which he then admits to be very difficult, if not impossible, until time decides the point.

You perceive the statement is to the effect that the diagnosis

is very easy, and certainly it would be so if the tests which he advances were of any value. He first presumes that the insensible man has friends, who have been with him, or who, at least know of his immediate antecedents. If the friends told the surgeon what was wrong with the man, the surgeon would then have little difficulty in making his diagnosis. But this is entirely begging the question, as it is just in those cases where there are no friends able to give the history, that there is a difficulty. The second point which is advanced-viz., the strong odour of drink, is a very fallacious sign. It is the recognized custom, whatever injury may befall a man, to give him spirits, with the idea of sustaining him until a surgeon sees him. So, when a person is found lying insensible on the street, the first good Samaritan who passes endeavours to pour alcohol into the mouth of the insensible man, and in lieu of his not being able to swallow, drenches him well with the spirit. By the time the surgeon sees him, he will no doubt emit fumes of alcohol, and you will readily admit how erroneous it would be to conclude that he was, therefore, insensible from its effects. Again, a person may have imbibed alcohol sufficient to have produced an odour from his breath, and he may be rendered insensible from some other cause, such as concussion of the brain, apoplexy, &c., and how wrong it would be to say, on account of the odour from his breath, that he suffered from alcoholic coma. On the other hand, suppose an insensible person is found, whose breath does not smell of alcohol, it is not correct to conclude that he is therefore not suffering from alcoholic coma. Indeed, in many instances of alcoholic coma, there is no distinctive odour from the breath, and in many others the fume is acetous instead of alcoholic. So that neither, in its presence, nor its absence, is the odour from the breath of any value. The remaining sign this surgeon refers to in the following terms: "That helpless condition which you see if a person is suffering from alcoholic poisoning." It is a little difficult to grasp the precise meaning meant to be conveyed by the phrase. As it is, persons affected with opium poisoning, concussion of the brain, and fracture of the skull, are all at times seen in helpless conditions, so that if it cannot be expressed with greater exactitude, I am afraid it will afford little information in a diagnostic point of view. There is, therefore, no aid found on this particular point, in that lecture, and it contains one item which might lead to the formation of erroneous conclusions.

I now direct your attention to some incidental passages contained in those excellent lectures on "Alcohol," delivered

before the Society of Arts, by Dr. Richardson, in 1875. In these Cantor Lectures he makes passing reference to the point which I am at present discussing, though he restricts his observations to the differential diagnosis of apoplexy and alcoholic insensibility. He states that, in apoplexy, the temperature of the body is above, in drunkenness below, the natural standard of 98° of Farenheit's scale, and upon this statement he founds a distinguishing test. He also proposes that our police ought to be taught the art of taking the animal temperature, so that, among other things, it would enable them to suspect the difference between a man in an apoplectic fit and a man intoxicated.

Now, in order to make such a test of value to the police, it would require to be one thich would distinguish alcoholic coma from all other kinds of insensibility likely to fall into their hands. It would be useless to say to them, if you find an insensible person having a temperature below 98°, this would indicate that he did not suffer from apoplexy, though it might be a case of fracture of the skull, opium poisoning, concussion of the brain, &c.; unless one were able to say that, all cases having a temperature below 98° might safely be reckoned as alcoholic coma, and treated as such, the test in their hands might not only be useless, but would be apt to lead into error. Now, this we cannot say, for the temperature in several of the affections spoken of falls at times below 98°, so that, as far as the police are concerned, this test would not afford them sure guidance. But though of no use to the police, this test would be of value scientifically, as well as to the surgeon, if it were reliable. There can be nothing more certain than a thermic test, as it supplies physical evidence, and is easily obtained. It has been well established that alcohol in excess reduces the animal temperature, and Richardson states that, as the fourth stage of alcoholism is approached, the decline in temperature becomes actually dangerous, and that in man the fall is often 21° to 3°. Though the general fact of the reduction of the temperature was quite familiar to me, yet my experience in alcoholic insensibility indicated considerable variation in the temperature in different individuals; so much so, that I feared it might invalidate the trustworthiness of the thermic test. In order, however, to place the matter beyond doubt, I resolved that I would record the temperature in the next fifty cases of alcoholic insensibility which came under my observation.

I have now obtained a record of over fifty cases of the insensible from alcohol, which, for tabular convenience, I have restricted to fifty. I think it right to state that I was assisted in record-

ing these temperatures by my late house surgeon and friend, Dr. Pinkerton. These observations were rectal, and they were taken by instruments corrected and certified at Kew. material, though largely composed of the poorer classes, was vet fairly representative of the various elements of society figuring in such a commercial centre as our own. The ages reached from eighteen months to sixty years: five being below twenty, nine between twenty and thirty, twenty between thirty and forty, thirteen between forty and fifty, one at fiftyeight, and two at sixty years. Of these, three were females. The observations extended over a year, and were made from 7 p.m. till 1 a.m., but the majority were made about 12 midnight. The temperature of the surrounding medium—viz., the room in which they were seen, ranged from 60° to 70° F. Some were, however, brought, within half-an-hour of the thermic observation, from the external atmosphere to which they had been exposed for variable periods. The whole of the persons whose temperatures are here recorded were so insensible that they could not be roused. The temperatures ranged from 98°.2 to 93°.4.

Two were	record	led at		98°·2.
Fourteen	,,	\mathbf{from}		97° to $97^{\circ} \cdot 9$.
Fifteen	22	99		96° to 96°.9.
Twelve	,,	,,		95° to 95°.9.
Five	22	2.9		94° to 94°.9.
Two	11	at		93°·4.

In this way eighty-two per cent ranged from 95° to 97°.9, and fourteen per cent from 93°.4 to 94°.9, while four per cent were at 98°.2. This gives a range of temperature of five degrees for alcoholic coma.

It must be borne in mind that these are rectal temperatures, and that Wunderlich reckons from one half to nearly a degree

higher in the rectum than in the axilla.*

It will be observed that many of these temperatures are very low. Taking Richardson's statement, that the temperature in alcoholic coma is reduced from $2\frac{1}{2}$ ° to 3° below normal—(even leaving out of consideration the difference between the rectal and axillary temperatures), the lowest point ought to be 95°. Even this, according to former experience, would be reckoned a very low temperature, but the observations just recorded register five cases at 94°, and two at 93°.4, the latter being

^{* &}quot;We may safely allow that the mean temperature of a healthy person is 95°6; that of the vagina, or unloaded rectum, will be from 90°1 to 99°5 F."—Wunderlich on Temperature.

nearly two degrees lower. It need scarcely be added that these temperatures took me by surprise; so much so, that I was inclined to doubt their correctness, and to attribute the lowness to some peculiarity of the instrument or mode of observation. On narrowly scrutinizing both these points I could discover neither flaw nor error; and the cases presenting a temperature of 94° (and some decimal points) became sufficiently numerous to permit of the fact being put beyond doubt. The first observation at 94° was several times repeated before it was accepted. In like manner, when 93°4 was registered, I said to one of my pupils, Mr. John Middleton, who was present, that some mistake had been made. The instrument was therefore readjusted and again introduced—this time fully three inches into the rectum-and retained there for six minutes, and again 93°.4 was recorded. So that there can be no mistake about that fact. The person on whom this observation was made recovered, and so did another case, having a temperature of 93°.4; but the latter had to be carefully watched for twenty-four hours, in the infirmary. From these facts it may be concluded that the temperature in man, during a state of alcoholic coma, has a latitude of five degrees; ranging from what may be considered normal down to 93.4. While alcoholic coma has a variable temperature, and, therefore, a thermic test cannot be absolute, yet, the greater majority of cases exhibit a marked depreciation in temperature. The question which must now be asked is, Whether the insensible from other causes than alcohol can be distinguished by this thermic test! In order that other causes of insensibility might be differentiated they would require to have a temperature above 98°.2.

While carrying out those observations on alcoholic insensibility, I also made a note of the temperatures exhibited by several other causes of coma. Thus, the thermic state of persons suffering from fracture of the skull was noted, and while finding that the temperature was subject to very great fluctuation, it was seen, in several instances, that the temperature was much below the normal, in one case reaching as low as 94°4 (vaginal temperature). Not only did the temperature vary in different cases, but it changed rapidly in the same individual within a short space of time. One instance gave a temperature of 97°2 when first noticed; when the instrument was introduced two hours after, it indicated 100°, and within twelve hours from the first observation, it was 104°. Again, in two cases of opium poisoning, the temperature was much below the normal, the one indicating 97° the other 96°5, and I

have no doubt but that still lower temperatures may be recorded in severe cases of opium poisoning. Then, as regards apoplexy, it was found, in two personal observations, that the temperature of the one was below normal, the other about normal (99°4). As these two isolated observations would be of little service, in the way of drawing conclusions, I deemed it expedient to consult my friend and colleague Dr. Robertson, whose large experience in nervous affections placed him in a position to give an authoritative answer to this question. Robertson stated that, all his cases of apoplectic seizures, showed an initial reduction of temperature, and that within two hours of the seizure, the fall, as tested in the rectum, had been from one to two degrees. Another authority, Bourneville, one of Charcot's former pupils, divides these cases of apoplexy, due to cerebral hæmorrhage, into four categories, and for our present purpose it is enough to note that, in every one of these, there is an initial lowering of the temperature in apoplexy, and that it may even sink as low as 96°. In some cases this lowering continued until death; in others it was followed by either a stationary period, and then an increase, or by a rapid increase above the normal, without a period of rest. From these it is gathered that in apoplexy there is an initial lowering of the temperature, sinking one or two degrees, and sometimes even reaching 96°.

Thus it is seen, that an insensible condition proceeding from alcohol, fracture of the skull, opium poisoning, and apoplexy, are all of them subject, at times, to exhibit low temperatures, and, therefore, the thermic test cannot be relied on as a means of differential diagnosis between these various conditions.

Coming now to personal experience, it is incumbent upon me to state that, at first, I found the discrimination between the various causes of insensibility to be, in certain cases, one of the most difficult tasks, and had the current teaching and text book literature been followed, many serious errors would have been made. Observations showed that there was considerable divergence between the generally recorded opinion and the facts regarding alcoholic coma, and this was considered the weak point in the differential diagnosis. If the diagnosis of alcoholic insensibility were once elucidated, other causes of insensibility would the more easily be relegated to their respective origins. And, at least, if the matter of alcoholic insensibility were eliminated, the case would then assume, to the examiner's mind, a more serious aspect, and one demanding careful scrutiny and supervision: consequently it would preclude the possibility of accident from non-attention arising from the apparent triviality of the case. It was, therefore, decided to examine closely the appearances of alcoholic coma.

Without occupying your time with details concerning this investigation, I will direct your attention at once to a point which I believe will facilitate the diagnosis of this question.

When first I had to deal with alcoholic coma, the text books invariably taught that the pupils in that state were dilated, whereas one case after another came under my observation, with contracted pupils, and as time went on, it became evident that this was the rule. Here, then, was a discrepancy between the generally received opinion and my observations, and the question as to the origin of this difference naturally presented itself. Either this must have been an error on the part of the observers, including myself, or the facts themselves must have varied. With regard to former observers, some, at least, of them could be relied on, and it was extremely unlikely that all of them had committed an error on such a simple point. But here were my own data, abundantly demonstrating the opposite state of the pupil. Was it possible that this divergence depended on some peculiarity in the alcohol consumed? This was extremely improbable, owing to the wide area from which the material for observation was supplied; the spirit used must have been of very varied kind and quality, manufactured by many makers, both home and foreign, so that it might be considered fairly representative of the kinds supplied in a great city. It could not, therefore, have been due to any peculiar kind of alcohol. While this question remained undecided, the cases showing contracted pupils still accumulated; but at last I found a case of undoubted alcoholic coma with a dilated pupil. Having satisfied myself as to that, I set to work to find out the cause of this peculiarity, making minute inquiries about his antecedents, the kind of alcohol he had consumed, &c.; all of which inquiries proved futile in the way of shedding light on the subject. Half-an-hour afterwards, on returning to the patient, accompanied by a medical friend to whom I intended showing the first case I had met with of alcoholic coma having dilated pupils, to my astonishment, on raising the eyelids, the pupils were then found contracted just as I had always found them in such cases. While endeavouring to elucidate the cause of this change, it occurred to me that the only alteration in his external condition, between this visit and the former, was the fact that on the first occasion he had been moved, having just been lifted on to a stretcher, carried up a stair, and then laid on a bench. Thinking, therefore, that movement might have produced this change on the pupils, it

was determined to test it. When about to carry out this project, he accidentally received a severe shake, when his iris immediately gave a series of waves, ending in a semi-dilated pupil, and after remaining in this state for some time, they slowly began to contract again, and in the space of twenty minutes they had assumed their former state of contraction. The shake was repeated experimentally, and though the patient was in no way roused thereby, yet his pupils underwent the dilatation and subsequent contraction in about the same time. Extended experience showed that the contracted pupil of alcoholic coma dilated on the application of external stimulus, such as by pulling the beard or hair, and that, as a rule, within half-an-hour, or less, the pupil again assumed its former contraction. But if the comatose state were about to pass off, the pupil, after it had been dilated by external stimulation, might then either only contract a little, but not to its former state, or it might remain in a semi-dilated condition. Here, then, is the probable solution of the discrepancy as to the state of the pupil. Former observers probably made their notes either at a period prior to coma, when the person was still attempting to move about, or if they were comatose at the time, efforts were probably being made to rouse them by shaking or other means, when the pupil would then present its dilatation. On the other hand, they were first seen by me while they were lying undisturbed in a deeply insensible state, and as they remained in that state the pupils were contracted. The pupil is contracted when the person is left undisturbed, and it is dilated when an attempt is made to rouse him. It is this order of succession which makes it characteristic, I may almost say, pathognomonic of alcoholic coma. Given an insensible person, who has lain undisturbed from ten to thirty minutes, who then presents contracted pupils, which dilate on the application of external stimulation (without in any way rousing the patient), and which, if the person is left undisturbed, begin to contract again within a short time, and I know of no other state to which this applies than alcoholic coma. It seems as if on the application of external stimulation, though the personal consciousness refuses to return, that the pupil half wakes up and then slowly drops to sleep again. It is nearer the state of the pupil in natural sleep than under any morbid condition, only, the pupils are more sluggish in their movements, and respond feebly to light and shade. The very process of shaking the person, necessary in this test, would at once rouse a sleeper, and so distinguish between sleep and coma, if this indeed were at all necessary.

In order to put this phenomenon of the alcoholic pupil to the test, it was resolved to take a note of fifty consecutive cases, and see whether this sign would remain a guide for alcoholic coma.

Of these fifty cases, forty-nine had contracted pupils. Forty-seven of these dilated on the application of external stimulation, and afterwards underwent contraction, either partially or quite to their former condition. In many instances this contraction took place in five minutes; in the majority from ten to twenty minutes elapsed before it occurred, while a few took as much as half-an-hour before the pupils had reached their former stage of contraction. One or two, though they did contract a little, yet did not pass the stage of medium, and in these cases the persons recovered from their insensibility very soon after. Now, two of the forty-nine cases that had contracted pupils were somewhat peculiar. In the one there was absolutely no dilatation on the application of stimulus; in the other, the pupil did slightly dilate, but only to a very limited extent, and that with great hesitancy, resembling, in this particular, the pupils of some cases of fracture of the skull.* These two patients were watched pending the solution of these peculiarities. After they had recovered, the iris was seen to have been affected by former disease, in the one case fixing the pupil completely, in the other partially so.

The single case out of the fifty that had dilated pupils was found to have fallen a short time before coming under my observation, and this had, no doubt, sufficed to dilate the pupils, as they were found to have undergone contraction after the

lapse of twenty minutes.

From these it is seen that ninety-four per cent of those suffering from alcoholic coma had contracted pupils, which dilated on the application of external stimulation; and the majority of these, after various intervals recontracted. Four per cent had contracted pupils, which, owing to physical peculiarity, would not dilate; while two per cent were dilated, owing to external stimulation, of an accidental kind, having been applied shortly before the observation was taken. But this last item may be deducted from the list of exceptions, as it, in reality, did not present a departure from the rule; the peculiarity being, that the observation began in the middle, as it were, when the pupil was found dilated. Therefore, it

^{*} In some cases of fracture of the skull having contracted pupils, on attempting to rouse the patient by shaking, the pupil may just very slightly enlarge (not dilate), but this is momentary, as it begins to contract almost immediately after.

may be said that ninety-six per cent of the cases responded to this test.

Now, it is important to note the precise conditions under which these observations took place; otherwise, they may lead into error. As a rule, the subjects of observation, here spoken of, had remained in the recumbent position for, at least, half-anhour, prior to the pupil test being put into practice, though some few cases were seen after a much shorter time, and yet exhibited a quite characteristic pupil. From the mere statement regarding the dilatation of the pupil, under external stimulation, it may be inferred, that one condition necessary to the contraction of the pupil is, that the person be allowed to remain at rest for some time,—the exact time necessary I am not at present able to say, it varies according to the depth of the coma; but I believe half-an-hour to be ample, and I have seen it at the end of five minutes. The pupils were always contracted to such an extent as to enable any surgeon to pronounce them indubitably so. Many times they have been pin head, and they have been more than once mistaken by surgeons for those of opium poisoning. In the case of a child aged eighteen months, the pupils were so minute as to be barely discernible. I am speaking here of the comatose condition, but it may be noted by the way, that, in the lesser stages of alcoholic insensibility, they are less contracted and have a greater tendency to dilate on slighter external stimulus. Among these fifty cases I included only those persons who were absolutely comatose, and who, for the time, could not be roused.

Under these circumstances, the pupil test affords very ample means of identifying alcoholic coma, and any errors that might be made, owing to finding a fixed, contracted pupil, or even a fixed dilated one, would only be a slip on the safe side, on the side of extra caution, and not one that would lead to mischief.

I here wish to append one or two remarks concerning alco-

holic insensibility.

Granted that a person is pronounced to be suffering from alcoholic coma, is it safe to leave him unattended? This must be clearly answered in the negative. One who suffers from alcoholic coma must be considered in a dangerous condition, owing to several complications which are apt to supervene. The one which is the most frequent and the most fatal is suffocation. There is no cause of sudden death so common, in my experience, as suffocation ensuing from alcoholic coma; and so well recognized among certain classes is the fatality which

attends this state, that it has been attempted for suicidal purposes; and, I fear, that in one or two instances, there has been a homicidal intent behind the apparent friendly administrations.

In the same manner as asphyxia sometimes ensues during the administration of chloroform, by the falling backward of the tongue, so suffocation sometimes supervenes during alcoholic coma. This happens most frequently when the person is in the recumbent position, with the head on the same level, or perhaps hanging backwards. But by far the most frequent cause of suffocation in this affection, is food getting into the larvnx. Vomiting is frequent in many who suffer from coma, but it is especially a feature of alcoholic coma. Now, when the food is forced upward into the mouth, the person does not possess the power of expelling it, a fit of coughing ensues, which probably clears it away, but, in the long inspiratory efforts, some small portions are very apt to get into the air passages and occlude them. This vomiting may ensue at any moment during alcoholic coma, and may end fatally, unless persons suffering in this way are placed under the immediate and constant supervision of a man of ordinary intelligence, instructed to deal with such cases.

Apoplexy is by no means such a common sequent of alcoholic insensibility as suffocation; but it does occur, both as an immediate and as a secondary effect. Persons in a state of ordinary alcoholic coma, pure and simple, have been seized with apoplexy, and such cases are very fatal. Secondly, persons may recover from alcoholic coma, and, after a night's rest may rise and commence their toilet when, suddenly, they fall into an apoplectic fit. The cerebral vessels, during alcoholic coma, have been engorged, and, probably, some have been over distended, yet they have been able to bear the pressure put on them at that time. But with the reaction consequent on assuming the erect posture and moving about, one of the formerly weakened vessels no longer withstands the strain, and gives way. Some such cases have been fatal, while two, at least, have recovered. It is very important to bear in mind the fact, that apoplexy may supervene in alcoholic coma, otherwise, a surgeon seeing a case of alcoholic coma at an early stage, and pronouncing it to be such, might afterwards, if apoplexy were ensuing, be considered to have made an error in diagnosis. Surgeons have been blamed under such circumstances.

The mere mention of the low temperatures found in alcoholic coma points to another possible danger, especially if such

persons were exposed to extreme cold. I have known one case which, as far as could be ascertained, died from this cause. There is one very important property which alcohol produces in its advanced stage, and one which is not so fully borne in mind as it ought to be-viz., its tendency to anæsthesia:-in that stage prior to coma. Wounds of considerable magnitude have been received without the person becoming aware of the fact, and severe and dangerous hemorrhage has ensued in certain cases before the attention of the friends or persons near have been arrested by the bleeding. It is commonly known that some persons sustaining fractures of the limbs, while under the influence of alcohol, make violent endeavours to use them with apparent immunity from pain, and in this way greatly aggravate the injury. On the other hand, the surgeon may take advantage of this state to sew and dress wounds, put up fractures, and reduce dislocations. Dozens of dislocated humeri have been thus reduced, and, on one occasion, a dislocated hip (dorsum of ilium), occurring in a very strong muscular farmer, was, without assistance, thrown in with facility.

After recovery from the effects of alcohol, the person generally feels his injuries more acutely, and at this stage makes a very petulant patient. But it is not so well recognized that, after the primary effects of alcohol have passed off, there remains, in some instances, a decided want of ordinary sensation. Every one knows how painful a broken rib is, and yet I have known a man who so far had recovered from the influence of alcohol as to be cool, intelligent, and reasonable, but he was so far oblivious to ordinary sensations as to experience no pains from four fractured ribs, with lung laceration to such an extent as to occasion emphysema all over the back, the neck, and one side. He had the frequent catching cough, characteristic of broken ribs, and when he was asked what he considered that was due to, he stated that he thought he had caught a little cold the night before. These fractured ribs, he had had for, at least, eight hours prior to the time of my seeing him, during which he had been for hours conversing with a medical student, and never once made reference to the side as being painful.

Paralysis of one or other arm is sometimes a sequent of alcoholic coma, but probably this is due to postural causes, pressure being exercised on the brachial plexus. Sometimes this passes off in a few days, but at times it is very tedious.

In the great majority of instances, the bladder is emptied involuntarily, without producing over-distension; this, however,

sometimes happens, and in such cases, serious consequences have followed. In this state I have drawn off large quantities of urine; on one occasion as much as ninety fluid ounces! One person who lay in bed, insensible from alcohol, was found with a ruptured bladder. This case was reported in the Lancet at the time. In one or two instances a state, to all appearances, that of uremic coma, has been seen, the bladder having been greatly distended with urine; the sleep of alcoholic insensibility passing into that of uremic coma, and death; no disease of the kidneys was found in one such case. In one instance a similar case was mistaken for opium poisoning, and treated during some hours for such by a physician. The true nature of the complaint was seen afterwards, and the man ultimately recovered.

ON A CASE OF ADDISON'S DISEASE IMPROVING UNDER TREATMENT, AND ON THE RELATIONSHIP BETWEEN ADDISON'S DISEASE, VITILIGO, AND ALOPECIA AREATA.

By DR. M'CALL ANDERSON, Professor of Clinical Medicine in the University of Glasgow.

(Read before the Glasgow Medico-Chirurgical Socoiety, 1st Nov. 1878).

GENTLEMEN,-It is not my intention to enter fully into the subject of Addison's Disease, but merely to show you a patient who has been very greatly improved by treatment, and to refer generally to the possible connection between this disease, Vitiligo, and Alopecia Areata. The lad referred to is 19 years of age, a wood turner, and was admitted into the Western Infirmary on the 16th July, 1878, suffering from loss of appetite, extreme languor, and debility. He seems to come of a tolerably healthy family, although his brother is suffering from some form of lung affection. He was always strong and well until about five months prior to admission, when his appetite began to fail. He lost all inclination for food, and was inclined to sleep, or to sit languidly at the fireside. Exertion of any kind was very distressing to him, and he gradually lost flesh. Shortly after this his friends began to remark that his skin was becoming darker in colour, although he was always somewhat swarthy. There has been no change, however, in his hair, either as regards texture or colour; and although anorexia has been a prominent symptom, he has never suffered from nausea or vomiting.

On admission, he was found to be considerably emaciated—weight, seven stones and a quarter of a pound. The whole skin was of a dirty brown tint, and decidedly darker than natural; this was especially marked in those situations which are naturally most pigmented, such as the scrotum, penis, nipples, &c. The anterior was, on the whole, somewhat lighter than the posterior aspect of the body; the vaccination marks on the left arm were in parts very dark, and there was a large dark patch on the front of the chest, where a mustard plaster had been applied some time previously. There was no discoloration of the mucous surfaces, which were pale.

An examination failed to detect any disease of internal organs; there was neither pain, tenderness, nor fulness in the region of the kidneys, and the urine was natural. Pulse 96, rather weak; respirations 24; temperature ranging from 98°2 to 102°—which, however, it only reached on one occasion, and for the most part it remained within the limits of health. I need not enter into the diagnosis of this case. It was admitted by all, who had an opportunity of seeing it, to be a well marked illustration of Addison's disease; and you will have

the opportunity, shortly, of judging for yourselves.

Before referring to the treatment which was adopted, let me say a few words as to the possible connection between Addison's disease, on the one hand, and vitiligo and alopecia areata, on the other; merely premising that it is a well ascertained fact that it is not every disease of the suprarenal capsules which is associated with the symptoms of Addison's disease; that, on the contrary, there is only one morbid condition which is capable of producing them—viz., scrofulous affection of these organs. Further, there is good reason to agree with Dr. Greenhow's opinion, that the symptoms are not dependent upon the destruction of these bodies, seeing that they may be entirely destroyed without the production of the symptoms, but upon the extension of the morbid process to neighbouring parts, especially the solar plexus, and the semi-lunar ganglia.

Vitiligo, or leucoderma, as it is termed, is a comparatively rare disease (although I have seen a good many examples of it), as appears from the fact that among 11,000 consecutive cases of skin disease which came under my notice, there were only four of vitiligo. It is, as you will observe [plate exhibited], characterized by brown patches, enclosing others which are preternaturally white. It is, in fact, a pigmentary affection, due not so much to excessive deposit, as to irregular distribution of the pigment of the skin. It is much less common in white persons than in negroes, in whom it gives rise, of course,

to much greater deformity, and induces a piebald appearance. It is also to be noted that on the head the hair growing from

the white patches is entirely devoid of pigment.

Now, you may naturally ask, What has this to do with Addison's disease! That will be apparent from a consideration of the case of a patient who first consulted me on 4th April, 1872. He was a married man, 50 years of age, complaining at that time of frequent seminal emissions, and a slight eczematous rash on the upper arm, with erythematous blotches on the chest. Even at that time he was very pallid. Under a course of iron, &c., he soon recovered. I lost sight of him until 8th August, 1876, when he again came to me complaining of debility, which had been increased by an attack of diarrhora. I found him very weak, and with a feeble circulation. It was then I observed that there was a dirty pallor of the skin, contrasting strongly with the pearly conjunctivae, and he told me that he had been very closely confined to business, in badly ventilated rooms. On the 3rd May, 1877, I saw him again, when a'l the previous symptoms were present in an exaggerated form, and, in addition, there was a great tendency to vomiting. On the 25th July he again complained of vomiting, and his bowels were inclined to looseness. this time I noticed that the dusky tint of his skin was much more pronounced, and that on some parts, particularly upon the backs of the hands and arms, the discoloration presented all the characters of vitiligo, that is to say, there were white patches, surrounded by others, which were deeply pigmented. I saw him, for the last time, on the 4th September, when he was much in the same state, shortly after which I went abroad for a few weeks, and he then consulted my friend Dr. Maclaren, who wrote me as follows regarding him:-

"I only saw him during the last week of his life, when the usual symptoms of the disease were well marked—great languor (he was entirely confined to bed), anemic discoloration of skin, with white patches here and there, loss of appetite, weak pulse, and vomiting. The treatment consisted in giving him wine and nourishment, and dialysed iron. He

sank from sheer exhaustion."

He died about the end of October, and we were fortunate in being permitted to have a partial post-mortem examination, which was conducted by Dr. Foulis. The following is that gentleman's report (permission was given only to examine heart, capsules, and kidneys):—

"Heart rather flabby; tissue of a pale brown tint; no

vascular lesion.

"Kidneys—Both had the characters of the large white kidney

of Bright.

"Capsules—Both converted into white, firm, reniform bodies, embedded in adipose tissue. On section the capsules presented a pale, yellowish-white surface, mottled here and there with pale gray and yellow tints. No trace of the normal texture of the capsule remained. On microscopic examination the structure is seen to vary in different parts. In one place a dimly granular fibrous tissue is visible. In another there is nothing but closely packed and rather shrunken small cells, rather less in size than the ordinary white blood corpuscle; while elsewhere, these cells are obscured by a fine granular debris, as if they were disintegrating."

Here, then, we have a case of Addison's disease in which the discoloration of certain parts presented all the characters of vitiligo; and, although it is unique in my own experience, Dr. Greenhow has reported one case of a similar nature.

I have long held that vitiligo is dependent upon perverted innervation of the sympathetic nerve, and that it is a neurotic affection seems to be the general opinion. Thus, Hebra states that it is due to "disturbance of innervation;" Tilbury Fox, that "it is dependent on depressed innervation;" and Erasmus Wilson considers it "a neurosis, the result of weakened innervation." Thus we are led to surmise that there may be some connection between this affection and Addison's disease, in so far, at least, as they are probably both dependent upon disturbance of the functions of the sympathetic nerve.

You are all familiar with the disease to which the name alopecia areata has been applied. It consists of circular patches of baldness, varying in extent from a solitary small patch to the removal of every hair on the body. I shall not occupy your time by discussing the question, whether there is a parasitic form of this disease. But I am perfectly satisfied, at all events, that there is a non-parasitic form; one of the proofs of which is to be found in the following cases, though not cited for this purpose. On the 15th October, 1874, a gentleman, aged about 25, rather pale, but otherwise healthy, consulted me on account of an attack of alopecia areata, which presented all the usual features of that disease—round bald patches, some studded with little stumps of hairs, some with downy hairs. The disease had almost entirely removed the eyebrows, and, to a considerable extent, the eyelashes. existed on and off for twelve years; and about five years before I saw him he first noticed white spots and patches on the hands and other parts. On examination I found that the

greater part of the trunk of the body, and, to a large extent, the neck and backs of the hands were the seat of well marked

vitiligo.

I saw this patient again on July 12, 1875, when I found little change, either in the alopecia areata, or in the vitiligo, and there was no deterioration of the general health. It may, no doubt, be urged that this case is not conclusive; and that the two affections occurring together in the same person may have been a mere coincidence. But a different complexion is put upon the matter if it is viewed along with the following:—

A girl, aged 10, healthy looking, and born of a sound stock, consulted me on 30th June, 1870, on account of round and irregular bald patches on the head, the latter being due to the coalescence of neighbouring round ones, and implicating in all about one half of the head. The case, in fact, presented all the naked eye characters of alopecia areata. recommended to regulate the bowels with simple aperients, to take small doses of wine, of iron, and Fowler's solution, and, after shaving the head, to sponge it night and morning with a lotion of perchloride of mercury (four grains to the ounce). On 28th July all the bald patches were thickly clothed with hair, which, as is usual in such cases when the hair first reappears, was white, owing to the absence of pigment. So far, there was nothing unusual in the symptoms, until 23rd Dec., when the patient again visited me. The hair was then perfectly healthy, but, to my surprise, as white in the sites of the previous bald patches as on the 28th of July, the scalp in these situations being also devoid of pigment. She then showed me what had appeared about a fortnight previous on her shoulders and back—namely, round and oval white spots, from the size of a crown downwards, the skin at the edges being deeply pig-In fact, she now presented all the characteristic appearances of vitiligo. These two cases tend to show that there is a very close relationship between alopecia areata and vitiligo. Now, if it be true, as we have endeavoured to show, that there is some connection between vitiligo and the discoloration of Addison's disease, then alopecia areata must likewise be allied to Addison's disease. Of course, I do not mean to say, nor do I suppose, that disease of the suprarenal capsules has anything to do with the production of vitiligo or of alopecia areata, but simply that a somewhat similar perversion of the function of the sympathetic nerve lies at the root of all three.

You are well aware that the prognosis of Addison's disease is gloomy in the extreme, and that treatment has con-

sisted exclusively in attempting to subdue special symptoms, such as irritability of the stomach, and to improve the strength of the patient by means of nourishment, stimulants, and tonics. On reflecting on the very unsatisfactory results which have accrued from this palliative and symptomatic treatment of the disease, it occurred to me that a somewhat different treatment might possibly be of service, or, at all events, that it could not well be less satisfactory than the usual routine. I reasoned thus: Addison's disease has now been proved to be dependent upon a scrofulous affection of the suprarenal glands. Now, when a localized scrofulous affection attacks any other part of the body we treat it constitutionally by means of antistrumous remedies, and by strong local applications if it is on the surface, or by stimulants or counter-irritants in some shape or other if more deeply placed. Then, why not resort to similar treatment when the suprarenal capsules happen to be the seat of the disease? I accordingly treated this case by means of blisters over the renal regions and cod liver oil, combined with rest, good food, and four ounces of wine daily. was commenced on 16th July, in doses of a tea-spoonful, gradually increased to a table-spoonful thrice daily. middle of September onwards, from 2 to 3 ounces have been administered daily. Three blisters were applied to the right renal region, on the 23rd July, 30th August, and 30th October; and two to the left on the 3rd August and 15th September. the 20th October the following note was taken: "Patient is a very great deal stronger; he walks rapidly, with a firm step, as if in perfect health. But he states that he still feels a little weak, though not half so much as on admission." His colour also is much paler; a fact which is corroborated by the patient himself, as well as by others in the same ward. The most remarkable improvement, however,-one with regard to which no doubt can exist, and which is the most striking sign of amendment in strumous affections generally—is in the body-weight, as is shown in the following table:-

	Stones.	lbs.		Stones.	lbs.
July 22,	7	0_{4}^{1}	Sep. 9,	7	10
,, 29,	7	$0\frac{1}{2}$,, 16,	8	0
Aug. 5,	7	2	" 23,	8	0
,, 12,	7	23	Oct. 7,	8	8
,, 21,	7	5	,, 14,	8	10
Sep. 2,	7	9	" 21,	8	11

That is to say, from 22nd July to 21st ()ctober, he has gained 1 stone $10\frac{3}{4}$ lbs. in weight.

I do not bring this case forward as an instance of a cure of Addison's disease, but as an illustration of great improvement resulting from the carrying out of what we may call a rational, as distinguished from a purely empirical, method of treatment; and I shall have pleasure, at a future time, in reporting the further progress of the case.

(The discussion on this paper will be found at p. 69).

ON A CASE OF INTRA-UTERINE AMPUTATION OF FINGERS AND TOES.

By D. N. KNOX, M.A., M.B., Dispensary Surgeon, Western Infirmary. Glasgow.

(Read before the Pathological and Clinical Society, 8th October, 1878.)

C. W., aged 3 weeks, was brought to the Western Infirmary Dispensary with the following congenital malformations. The right hand had lost portions of the second, third, and fourth fingers, the second and third having been amputated in the middle of the first phalanx, while the fourth finger was slightly longer, having been amputated at the first phalangeal joint. The stumps of these fingers were not webbed, and the minute cicatrices at their points were quite healed. In the case of the left hand, all the fingers except the thumb were cut short at the first phalangeal joint, and closely webbed together. The stumps were also firmly bound together across their truncated extremities by a small oval cicatrix, little more than a quarter of an inch long, and had been so much compressed during the process of amputation that what remained of the fourth finger was pushed on to the palmar aspect of the other three. The right foot had the great toe and the second and third toes amputated at the first phalangeal joint, and webbed together, each stump presenting a separate cicatrix. On the left foot the tips of all the toes were gone by the roots of the nails. About two inches above the ankle, the left leg showed a well marked furrow completely surrounding and constricting the limb. The bottom of this furrow presented a somewhat cicatricial appearance, and was about a quarter of an inch in depth all round. Besides these malformations, there was another on the right side of the face, where a bridle of cicatricial tissue about 14 inches long, stretched from the skin of the side of the temple to the outer part of the right upper

eyelid, producing a slight amount of eversion, and preventing complete closure of the lids. A similar band connected the upper margin of the right lower lid near the inner canthus with the lower margin of the corresponding upper lid, and also with the inner part of the surface of the cornea. This latter band was directed obliquely outwards, and by its contraction held the eyeball rotated slightly inwards. There was also a slight furrow on the upper lip, to the right side, indicating a partial harelip. The child seemed to be at that time, in other respects, healthy and well grown for its age, and to-night, when its age is $3\frac{1}{2}$ months, the members of this Society may see that it is, in spite of its deformity, healthy and well developed.

The mother, who is also a strong and healthy young woman, stated, in answer to my inquiries, that about the third month of pregnancy, she had been whitewashing the ceiling of her house, and had fallen from the top of a table, a chair, and a stool, placed one upon the other, against the corner of a dresser, and had bruised her leg and her left side. About a month later she had been engaged in some similar occupation, and had fallen from a chair placed on top of a table to the ground, and again hurt herself. With these exceptions her pregnancy had been free from accidents, and her labour, at the full time, natural and easy. Nothing peculiar was remarked by the medical attendant as to the condition of the membranes, though he had of course at once seen and pointed out the malformations. No history of syphilis on the part of either parent could be made out, and from the mother's story it seemed a fair inference to suppose that the injuries received were in some way the cause of the malformations.

In order to elucidate the subject, I have turned up the histories of some other reported cases of intra-uterine amputation, and may perhaps be allowed to refer to them here.

Montgomery,* in 1832, reported a case, by means of which he was enabled to indicate the true manner in which these malformations are produced. Before his time such cases were considered spontaneous amputations produced by inflammation and gangrene, or else they were regarded as instances of abortive development. In the description of this case, Montgomery says, "There were distinct threads of, I presume, organized lymph passing from both hands to the legs; at one end these threads had formed a complete ligature round the middle of each hand, causing a distinct depression where it passed, the part of the hand below it being almost completely undeveloped; from the hands these threads descended at both

^{*} Dublin Medical Journal, vol. i, p. 140.

sides towards the legs, which were crossed, and surrounding them in this position, just above the ankles, so tightly that fully two-thirds of their whole thickness were thereby divided, without however any breach of the skin having taken place, nor was there the slightest appearance of disorganization or discoloration of any of the parts, but as were the hands, the feet also were imperfectly formed, totally undeveloped, and, of course, misshapen." In a second case, reported in the same Journal, vol. ii, p. 49, there was "a deep depression, just above the left ankle, surrounding the limb, and sinking to such a depth as to leave only the bones and skin unaffected by it; the appearance of the groove is exactly such as would be made by tying a string with great force round the plump limb of a child, and, indeed, is such as in my opinion could not be produced by any other means." In other respects the appearances of the foot below the ligature resembled those of the first case. These cases of Montgomery's were not quite conclusive as to his theory, inasmuch as no part was completely severed from the trunk, but every one will allow that in the light of more recent cases, they, by their very incompleteness, indicated the nature of the process almost better than any other example could do. When Montgomery wrote, he had also to answer an objection of Haller,* who had said that no instance could be found in which "manus truncata, aliusve artus in membranis fetus seorsim a corpore repertus sit." This objection his own cases did not answer, but in two cases which he quoted from Watkinson and Chaussier the amputated parts were found in the discharges. In these latter cases the separation was attributed to gangrene, though without any apparent reason.

Sir J. Simpson † has largely helped to throw light on this subject, both by his researches and original observations. He supports Montgomery's views as to the character of his cases, and their great value in indicating the nature of the amputating process. Besides cases agreeing in all essential details with those described by Montgomery, Simpson further adduces evidence of another constricting agent—the umbilical cord—which has caused amputation in a considerable number of instances. As to the nature of the constricting bands described by Montgomery, Simpson agrees with him in that they are most probably organized lymph poured out through inflammatory action. Such bands have been found attached to all parts of the feetus, and may even unite the feetus to the

* Elementæ Physiol., p. 140.

[†] Obstetric Works, edited by Priestley and Storer, vol. ii.

membranes and placenta or to the umbilical cord. The surface of the feetus may in fact be compared to the pleura, and, like that membrane, is subject to inflammation and the exudation of plastic lymph, forming adhesions to opposed surfaces and neighbouring structures. The chief seats of such adhesive bands as by their constriction result in amputation, would appear to be these, in the order of frequency. 1st, across the middle of the hand and foot; 2nd, across the roots of the fingers and toes; 3rd, round the fore arms and legs; and 4th, round the upper arms and thighs. If the constriction is not sufficiently tight to produce amputation, the part constricted off remains undeveloped, or development may go on in a certain fashion in the slighter cases, when the extremity is misshapen or clubbed.

As regards the time when these accidents occur, the majority seem to happen in the early months of pregnancy. would bring the results into harmony with Serres' law of the development of the limbs, according to which, the distinct formations of parts is complete in the distal sooner than in the proximal segments. The distal segments are thus more exposed to injury in the early months. There is one point which has not been explained in any way, and which, indeed, has hardly even been noticed, except by Sir James Paget.* I refer to the remarkable symmetry of the malformations in a large number of cases. Playfair + gives a drawing of a very good example of this, where amputation had taken place above both elbows and knees. In cases where the malformation is unsymmetrical, it is usually confined to one member—the left arm. This is probably connected, by some occult law, with the fact that the constricting band round the leg in my case, and in one of Montgomery's cases, was also on the left side.

Besides constriction, another cause of these amputations should be mentioned. Simpson, in the first edition of his paper, suggested that fracture or injury to an extremity might be the cause of amputation, and in the last edition a case is quoted from Martin proving the truth of this suggestion. In this case the mother had fallen from a ladder eight weeks before delivery, and the child was born with the left arm amputated near the shoulder, and the wound still not entirely closed. The separated but nearly full-sized arm was expelled with the placenta.

I think a review of the cases reported by others bears out the diagnosis I have made in the present case, that we have

^{*} Surgical Pathology, p. 14.

⁺ The Science and Practice of Midwifery, vol. i, p. 267.

here to deal with a series of intra-uterine amputations caused by traumatic inflammation and exudation, leading to the formation of constricting bands. The limbs of this child present all the appearances of common artificial stumps, with the other parts perfect up to the points of separation and cicatrisation, and they show distinct evidence of constriction having taken place in the compressed stumps of the left hand, and the circular depression round the left leg. The separated parts are not present—the point upon which Haller laid so much stress—but their absence can readily be accounted for by the early age at which we suppose the cause to have come into operation, by their small size and soft texture, and by the readiness with which they would be dissolved and disappear in the amniotic fluid.

TWO CASES ILLUSTRATIVE OF CHYLURIA.

BY J. M. BARBOUR, M.B., C.M., BOMBAY.

CASE I.—Mrs. H., setat 37, a European woman, the mother of five weakly children, had always enjoyed good health until June, 1874, when, being in Scind, and one month pregnant, she first noticed that her urine had suddenly become milk-white and coagulable. Frequent difficulty in micturition was experienced from impaction of coagula within the urethra, causing impediment to micturition. Her general health does not seem to have suffered in any way. The mineral acids, iron, tannin, &c., were all tried, but without success, when the disease seems to have spontaneously disappeared in September of that year. Subsequently, good health was enjoyed until the following November, when a second similar attack occurred, which lasted during the two succeeding months, and she was then advised to try a short residence in England. During her stay in England, from February 1876, to November 1877, she was entirely free from the disease, but within a month after her return to India, the disease again manifested itself for the third time.

Her general health continues unimpaired, excepting occasional bearing-down pains felt in the back and loins. Catamenia are regular, and at such periods the quantity of fat in the urine is markedly less. The inguinal glands on the left side are considerably enlarged, but painless. There is no undue frequency in micturition, and the daily quantity of

urine is normal. Before the urine can be voided, patient has frequently to withdraw from the urethra a fatty coagulum, and sometimes abundant coagulated pieces are directly passed from the bladder.

To the naked eye the freshly voided urine cannot be distinguished from milk, excepting when it sometimes takes on a slight pinkish tinge, and in from three to five minutes it entirely coagulates into a firm mass, almost of the consistency of blanc-mange. There is much uniformity in the character of the urine passed at different hours of the day.

Microscopic examination shows granular matter (= chyle), a few fat drops and blood corpuscles, and crystals of phosphate of lime. Filaria were found in the blood and urine after

lengthy research.

ANALYSIS.*

Sp. gr. 1.025.							
Water, .							95.40
		Fat,	• ,				.15
Solid Matter		Albu	men,				2.80
		Other	rorga	anic	matt	er,	.70
		Ash,					.90
							70000

There are few of the reputed remedies for chyluria which had not a fair trial in this case. The mineral acids, iron, tannic acid, gallic acid, change in diet, change of residence—nothing has proved of any service excepting alcoholic stimulants, which have always afforded a temporary relief.

Case II.—W. J., ætat 19, an intelligent seaman, was born of European parents in Ceylon, in which island he had always resided until 1872. He enjoyed good health until the end of 1869, when he states that his urine suddenly became milk white and coagulable. There was frequent temporary retention of urine from impaction of small coagula in the urethra. When these were removed the remainder of the urine was passed fluid. In about a month after the onset of the disease, he experienced pain in the thighs and knees, which he thinks were then slightly swollen; in consequence of this he was confined to bed. It was then discovered that he only voided chylous urine after lying some time in a recumbent position. He states that he took "tincture of steel" for two months, when the chylous condition of the urine suddenly ceased. He ascribes no credit to the drug for his recovery.

^{*} By Dr. K. R. Viccuji, Grant Medical College, Bombay.

In February, 1877, when two months at sea, the urine suddenly became chylous in the *morning* only. This second attack lasted eight months, and disappeared spontaneously.

He took no medicine, and his general health was good.

Three months afterwards he came under my notice, suffering from a third attack. Physical examination revealed nothing abnormal, excepting an enlargement of the inguinal glands of the left side, which have now attained quite the size of an average duck egg. He has observed this enlargement since his first attack nine years ago. He has never had syphilis, and can assign no reason for this condition. In last, as in previous attacks, it is only the morning urine which is chylous.* The naked eye appearances of the urine are exactly similar to those of milk; it has a sweet fruity smell, and is almost tasteless. On no occasion has it coagulated during the present attack. The microscope reveals abundant fat granules, a few blood cells, and crystals of uric acid. Filarice were not found in the blood or urine.

Analysis.†	
Sp. gr. 1 022. Water,	92.22
Solid Matter 7.78 Albumen, Other organic matter, Ash,	3·91 1·59 1·09 1·19
	100:00

The evening urine is of a pale amber tint, perfectly clear, and with a slight nucous deposit. Sp. gr. 1025. Albumen present (about $\frac{1}{12}$ in volume). Microscope shows crystals of uric acid

and amorphous urates. No blood or pus cells.

Similar remedies as in previous case were employed without benefit. Brandy, beer, &c., gave temporary relief, especially when given alternately with astringents. His general health remains unimpaired, and he now leaves this port to follow his calling.

The foregoing cases well illustrate the two varieties of this disease, as seen in the tropics—viz., when the urine is at all times chylous, and again when it is only so after a period of repose. In the first case considerable difficulty was experienced

^{*} Any suspicion of trickery has been obviated by frequently causing him to pass water at different times during the day, in presence of myself and others.

[†] Dr. K. R. Viccuji, Grant Medical College, Bombay.

in detecting the *filaria*, many dozens of samples of blood and urine having been searched before a single specimen was found. In the second case, I confess I was unable to discover the parasite in blood or urine. Possibly, in a measure, this may have been due to the paucity of observations made, and the extreme difficulty in obtaining fresh samples of urine, in a climate where an hour or two is sufficient to produce vibriones. Dr. Lewis, of Calcutta, who has contributed so much to the etiology of this disorder, so ably recounts this difficulty that we make no apology for quoting his remarks at length:—

"I feel that I cannot too often or too strongly reiterate the fact that the detection of filariae, whether it be in the urine or in the blood, is sometimes a matter of very considerable difficulty. Hours may have to be spent in examining the sediment of apparently excellent samples of chylous urine before they are found; fresh supplies may even be required, for the numbers present may vary much in different samples obtained from the same individual; and they may be even absent for a time from either the urine or the blood, or from both. I have also observed that occasionally they will disappear altogether for some time previous to the disappearance of the chylous condition of the urine. It will, therefore, be evident that no great amount of foresight is required to be able to predict that, owing to want of proper appliances, want of time, or other circumstances, such remarks as 'filariæ were searched for, but not found, will not unfrequently be recorded in connection with reports of chyluria cases."

MALIGNANT TUMOUR IN THE POSTERIOR MEDIASTINUM AND ITS DIFFERENTIAL DIAGNOSIS.

By A. WOOD SMITH, M.D.,

Physician and Lecturer on Clinical Medicine, Glasgow Royal Infirmary.

This case recalled the fact that the objective and subjective symptoms of intra-thoracic tumours are determined more by their position and pressure-signs, than by the nature of these growths, and how easily they may simulate other affections of the chest.

The present example occurred in a widow, aged 45, who was admitted into the Glasgow Royal Infirmary, on the 18th of November, 1878, to be treated for "bronchitis" (apparently).

Her only complaint was frequent and imperfectly finished cough, with abortive attempts at the expectoration of white frothy mucus, and dysphæa, from which she had suffered for two months, and which had been produced, she said, by the changes of temperature incidental to her occupation as a mill worker. Owing to a natural reticence, and bodily distress, we could not elicit much subjective information; but, on repeated inquiries, she admitted having had deep-seated pain between the scapulæ, and increasing difficulty of swallowing, with progressive emaciation. Neither her personal nor family history threw any light on her present illness, and certainly there was no clue to the existence of cancer.

In appearance, she was cachectic, pallid, with a wearied aspect, aggravated by divergent squint in both eyes. The pupils were unaffected and equally dilated. Orthopnea was occasionally varied by a semi-prone position in bed towards the right side. The temperature was normal, and equally so in both axillæ. The absence was noted of enlargement of veins or glands, and there were no dropsical effusions out-

wardly.

As the thoracic affection appeared to be primary, our attention was centred on unravelling the cause of the respiratory distress, and the following are the results of our observations.

Inspection showed the breathing to be rapid, but interrupted by the harassing cough, carried on by all the accessory muscles that could increase the elevation of the upper zone of the chest; and on looking posteriorly we found the expansive movement confined to the right side. A quiescent state of the left side, with a slight arching forwards anteriorly of the third and fourth ribs was noticed.

Mensuration below the mammae gave 16½ inches on the left side, and 15½ around the right, while palpation over the right lung conveyed a coarse tremor, produced in the lower part of the trachea, and transmitted with much force along the right bronchus and its ramifications. Movement and fremitus had well nigh disappeared over the lower two-thirds of the left lung, without, however, any bulging of the intercostal spaces.

On percussing the right side of the chest, the notes educed were markedly resonant and of medium pitch, both anteriorly and posteriorly; whereas, over the left side, there was dulness and slightly increased resistance to the second rib anteriorly and posteriorly, as high as the scapula. These signs extending laterally and anteriorly, were lost in the area of cardiac dulness, which projected slightly upwards to the second rib, and also pressed downwards on the liver. It was difficult to map out

the exact limits of dulness in the mammary regions, as the mammæ were pendulous and the patient so easily exhausted that the physical signs could be elicited only at different visits. The upper third of the left lung was resonant, and there was no encroachment of the right pleural space by pressure from the left, which, with other indications, militated against the idea of pleurisy existing.

Auscultation over the right lung showed that the "brassy" rhonchus existed only on inspiration—expiration being practically inaudible, and the vocal resonance nil. Respiration throughout the left lung was restricted, wheezy in the upper third, and where the parts gave a dull percussion note, it was

distantly tubular and the voice slightly bronchophonic.

As an aid in determining the exact origin of the tumour, we auscultated the asophagus while the patient swallowed water. Placing the stethoscope to the left of the third or fourth dorsal vertebra, and listening, we heard the fluids trickling down-

wards, as if immediately under the ear.

The heart sounds were rapid (120 per minute) occurring intermittently, and distinctly heard towards the right breast. The radial pulses were equal in volume and compressible. There were no signs of cardiac mischief beyond the suspicion of pericardial effusion.

The laryngoscope demonstrated the absence of any laryngeal obstruction and the equal mobility of the vocal cords with

diminished power of approximation.

Beyond indications of passive congestion of the liver and slight displacement downwards, I need not refer to the minor details of this case, and will now proceed to the

Differential Diagnosis.

BRONCHITIS?—Not certainly simple, as proved by the onesidedness of the bronchial irritation, no prolonged expiratory sounds, absence of pyrexial symptoms, with a persistence of the frothy expectoration until a few days before death, when pus was noticed in isolated quantities.

PLEURISY WITH EFFUSION?—No history, The physical signs pointed to consolidation of lung; and any decubitus was on the unaffected side, which could not have been tolerated

with the weight of a pleural effusion.

PNEUMONIA?—Her illness did not follow the course of sthenic pneumonia. Dysphagia, also, was a marked symptom, indicating centric pressure.

CANCER OF THE LUNG?—This is generally developed

secondarily, and, if there is much expectoration, it will most

probably contain blood, resembling dark currant jelly.

ANEURISM OF THE DESCENDING THORACIC AORTA?—This was excluded by the absence of any indications of disorder of the circulatory system; her sex; and the dulness was too lateral and extensive to be caused by such a tumour.

PERICARDITIS WITH EFFUSION would produce a different area of dulness, and the muffling of the sounds over the apex, &c.

To my mind, the diagnostic points, indicating a cancerous growth of the bronchial glands in the posterior mediastinum, were:—the short history of the illness—(two months' duration)—and the cachexia; the evidences of pressure on the trachea and right bronchus, producing bronchial tremor; the dysphagia, the results of the asophageal auscultation, and the superficial character, with displacement to the right, of the cardiac sounds. From these facts I could only infer that an overgrowth of the contents of the posterior mediastinum had jammed the cosphagus against the vertebre, and the heart against the sternum, and thus the sounds developed anteriorly or posteriorly in the thorax were heard very superficially.

After a sojourn of twelve days in the infirmary, this poor woman died suddenly while sitting up in bed. Death resulted from failure of the heart's action, as was revealed by a post

mortem examination.

Post Mortem Appearances, by Dr. Foulis.

Body: moderately nourished. Slight varicosity of veins in lower extremities; no dropsy; surface of chest appeared to have been blistered extensively. Both eyes had an external

squint, and were rather prominent.

On opening the chest, nearly twenty ounces of reddish serum were found in the pericardium. The surface of the pericardium was everywhere smooth, without any signs of inflammation or of blood clot. Heart was rather small; the tissue was firm, and structure normal.

The left pleura was extensively adherent by old adhesions. The right lung was normal in structure, but the smaller air tubes contained muco-pus. Around the roots of the lungs, and enveloping the descending aorta, the bifurcation of the trachea, the pulmonary vessels, and the gullet, was a mass of enlarged glands. The texture of these glands was firm, white, and on section semi-transparent.

The trachea and the gullet, as well as the various vessels, were considerably compressed by these glands. From the

surface of some of the cut glands a quantity of milky fluid

could be scraped away.

The tissue of the left lung was considerably congested throughout. The upper part was emphysematous and full of a frothy fluid; the lower lobe was quite solid, of grevish mottled red and white colour, and in it the bronchi were filled with pus, while from the cut section there exuded a dirty gray purulent fluid.

The liver somewhat granular and nutmeg on section.

The stomach and the bowels were rather contracted, and were almost empty, containing a little mucus and pulpy food.

Kidneys firm and larger than normal; the capsule very adherent, the surface granular and tearing away with the capsule. Section was also granular, and the cortical substance somewhat increased in amount throughout.*

Suprarenal capsules were natural, as were also the pelvic

Spleen firm in texture, of moderate size, and of pale purple colour

Larvnx presented a normal appearance.

The left recurrent laryngeal nerve was pressed upon by one of the enlarged glands.

The brain presented nothing noteworthy, except a slight

cedema in the subarachnoid membrane.

The aorta was normal. The venæ cavæ was distended with blood.

There was a slight convexity of the spine to the right in the dorso-lumbar region.

A SERIES OF CASES OF MALIGNANT TUMOUR OF THE LUNGS.

UNDER THE CARE OF DR. R. PERRY, Physician, Glasgow Royal Infirmary.

Reported by G. ROTHWELL ADAM, M.B., C.M., Resident Physician.

THESE three cases, occurring within a comparatively short period, illustrate many of the symptoms of malignant tumour involving the lung. In all of them the diagnosis was confirmed by a post mortem examination, for notes of which we are indebted to Dr. Foulis' report book.

^{*} During her life the urine was scanty, loaded with lithates, but otherwise normal.

Case I.—Malignant tumour involving right lung.—
J. B., et. 25 years, a labourer, was admitted October 25, 1877, complaining of pain in the chest and shortness of breath. The patient has been complaining of the pain and dyspnœa for the last ten months. He first noticed a cough, but had no expectoration; the cough has gradually increased. About three weeks before admission he expectorated about half an ounce of blood. Formerly he perspired freely, but now the skin is hot and dry.

Physical Examination.—There is dulness on percussion on the right side of chest, extending from the apex to the nipple. Auscultation shows that the respiratory murmur is entirely absent over this area. The left side of the chest appears to be normal. Posteriorly mucous râles are heard over the right side. Measurement of chest:—right side, 17½ in.; left side,

17 in.

Nov. 14. The dulness has extended to about one inch below the nipple. The hæmoptysis, which had ceased, has again returned.

Nov. 17. There is dulness throughout the entire right lung, and an absence of vesicular murmur.

Dec. 11. The measurements were again taken, and were as follows:—right side, 18 in.; left side, $17\frac{1}{2}$ in.

Jan. 12. The patient died.

Post Mortem Examination.—The pleura was strongly adherent on the right side, and contained about 3 oz. of serum. The left lung weighs 1 lb. 6 oz.; is emphysematous and congested, containing, through its substance, black specks about the size of a split pea. The right lung is of large size, pressing on the heart and left lung; it weighs 8\frac{3}{4} lbs., and from its size, weight, and adhesions, is very difficult to remove. On section there were found to be cancerous nodules, from the size of a threepenny piece to a hen's egg, implicating the entire substance of the lung, with the exception of a small portion posteriorly, lying next the spine. The glands in the thoracic cavity were enlarged and similarly infiltrated. All the other organs were normal.

CASE II.—MALIGNANT TUMOUR OF MEDIASTINUM INVOLVING LEFT LUNG, &c.—M. H., at. 20, domestic servant, was admitted to the Royal Infirmary, October 21, 1878, complaining of cough, shortness of breath, and pain in the left side. About a month before admission, patient felt pain and slight difficulty in breathing on exertion. She has never had any bloody expectoration; the sputum is white and frothy. Her previous history shows

that about four years ago she suffered from rheumatic fever, previous to that illness she had enjoyed good health. On admission the patient appeared well formed, not emaciated in any way, but well nourished. She is of fair complexion, combining the sanguine and strumous constitution, menstruation is irregular. At no time has she suffered from night sweats. Respiration is short and difficult, but regular. The cough short and frequent, of a laryngeal character; distressing the patient considerably. The dysphagia has increased rapidly, and since her admission she finds difficulty in swallowing even fluids. No enlarged glands could be felt, either in the neck, axilla, or groin.

Physical Signs.—On inspecting the chest, marked congestion of the superficial veins of the left side of the thorax is noticed, especially towards the apex, and extending over the left shoulder joint. There is a fulness of the chest wall on the same side, reaching to within an inch of the clavicle on the parasternal line. The respiratory movements are deficient on the affected side. Palpation shows that there is no expansion at the apex of the left lung, and, latterly, it is but slight. Vocal fremitus is absent. By measurement the chest is found to be increased in size, on the left side by half an inch, the exact measurements being—from the fifth dorsal vertebra to a corresponding point in front, right side, $14\frac{1}{2}$ in.; left side, 15 in. From sixth dorsal vertebra—right, $14\frac{1}{2}$ in.; left, 15 in. From tenth dorsal vertebra—right, $13\frac{1}{2}$ in.; left, $13\frac{1}{2}$ in.

On percussion at the apices of both lungs a clear note is produced, and the note on the right side is normal throughout. On the left side, absolute dulness commences about an inch below the clavicle, extending in a vertical line down to the upper margin of the fifth rib; and in a lateral direction, from the left margin of the sternum at the third interspace, to the anterior axillary line. On auscultating the chest the breath sounds are heard to be increased on the right side, and on the left in the resonant space. Over the dull area the vesicular murmur is entirely absent, vocal resonance cannot be elicited. Posteriorly, the physical signs cannot be so exactly noted, owing to the distress examination causes the patient. But dulness and absence of vesicular murmur over a considerable area are the points observed. The surface temperature on the two sides was found to vary:—

		Left side.		
Eve.		99°·4		100°
Morn.		97°.6		99°
Eve.		98°.3		99°

Thus showing an increase of about half a degree in the temperature of the affected side. It is also noteworthy that the pulses differed; that of the left side being less strongly marked than that of the right. The rate of the blood current was

apparently the same.

Nov. 11. During the last few days the patient has been affected with dyspnea to a much greater extent than formerly. She also perspires profusely at night. The expectoration still continues frothy. Examination shows that the dulness has now advanced as high as the clavicle, and the respiratory sounds are absent in that part of the lung. On the right side coarse mucous râles are heard accompanying respiration. The patient cannot now speak above a whisper, and it appears as if the left vocal cord were paralyzed by the pressure of the tumour on the recurrent laryngeal nerve.

Nov. 19. Patient died to-day.

For the last few days the dyspncea was so distressing that

she could not assume the recumbent posture.

Post Mortem Examination.—The body was well nourished. No cedema of legs or of body. The right pleura appeared normal; the left was everywhere adherent. The upper part of the left lung was occupied by an extensive nodular mass extending into the neck, as high up as the thyroid gland. This mass was firm and closely connected with the lung tissue. On removing the lungs en masse the following disposition of parts was seen. The whole of the lower part was occupied by gray hepatization. In the neck the nodular mass appeared connected with the cervical glands, and extended into the mediastinum, enclosing aorta and roots of cervical vessels. These vessels were closely surrounded and imbedded in the tumour, which seemed to invade the external coat, and the vessel could not be shelled out of the tissue without tearing this coat. The middle and internal coats appeared normal. The tumour involved the upper third of the left lung, and was inseparably connected with it by nodular prolongations of the tumour mass into the lung tissue.

The general colour of the tumour substance itself is pale grayish yellow, in some places pearly gray, in others opaque and streaky. Here and there, near the growing edge, the tissue is of a reddish or purple colour. On section an abundant milky fluid can be scraped off. In the larynx the arytenoid mucous membrane presented signs of recent cedema; the left vocal cord was

slightly thickened, as compared with the right.

The right suprarenal capsule was enlarged to the size and shape of a jargonelle pear. On section it was found to consist

entirely of soft cancerous substance, of a grayish colour mottled with red. In the centre, and somewhat to one side of this mass, was a round nodule, about the size of a hen's egg, surrounded by a fibrous capsule. The left suprarenal capsule was perfectly normal. Both kidneys contained several small pea-like bodies, apparently of a malignant nature. Under the microscope, sections of these various morbid conditions showed the structure of medullary carcinoma.

The heart seemed to be pushed into the middle line, the external surface of the pericardium was thickly covered with large dilated veins. On opening the pericardium, about 8 ounces of reddish serum escaped, with fragments of soft clots. The surface of the heart and parietal pericardium were thickly coated with rough shaggy lymph. The valves of the heart were normal. The rest of the organs, both external and

internal, appeared normal.

CASE III.—MYELOID SARCOMA OF LUNG SECONDARY TO SIMILAR TUMOUR OF RADIUS.—R. M'A., æt. 18, milk boy, admitted November 15, 1878, complaining of spitting of blood.

After a paroxysm of coughing the patient expectorated a quantity of blood. In May last the patient had his left arm amputated in this Infirmary, and it was about three months afterwards that he noticed the bloody expectoration. After his recovery from the operation, the boy returned to the country, and to his occupation; and while so engaged, he was crushed between two carts, hurting the right side of his chest. The injury was not severe, and did not not lay him up; and

was subsequent to his expectorating blood.

The patient complains of difficulty of breathing on exertion, but he has experienced no dysphagia. The tumour, for which he had his arm amputated, was a mycloid sarcoma, attached to the left radius. On admission, the boy presented the appearance of a well nourished lad for his age, fair complexioned, and of a strumous constitution. The appearance was not cachectic at this time. The voice is husky, the usual tone not above a loud whisper, but after clearing his throat he speaks tolerably well. Laryngoscopic examination reveals no morbid condition of the larynx. He has a frequent, short, husky cough, but no expectoration except the hamoptysis, which is only occasional.

The following table shows the average variation in 24 hours:—

Morn.	Right side.					Left side.		
			99°			98°·4		
Eve.			99°·4			99°		
Morn.			$100^{\circ} \cdot 2$			99°		
Eve.			101°·4			101°		

Note.—The registration of the temperatures in this and the preceding case is that of the surface. The thermometers being laid flat on both sides of the chest, and covered with cotton wool.

The chest is well formed, but there is a slight fulness, and obliteration of the intercostal spaces, on the right side; extending from the third to the sixth rib. On taking a deep inspiration the whole chest seems to be lifted up. The respirations are short, but not frequent. There is feeble expansion at the apices, and lateral expansion is diminished. Vocal fremitus is absent. By percussion a resonant note is elicited, on both sides, in the infraclavicular regions. On the left side the percussion is normal. On the right side, dulness commences at the third interspace, and is continuous with that of the liver; laterally, from the margin of the sternum, at the level of the fourth rib, it extends right round to a cor-

responding point posteriorly. The dulness is absolute.

Auscultation shows that, on the left side, respirations are coarse, with occasionally sibilant râles. On the right side, at the apex, supplemental breathing is distinctly heard. Over the dull area the vesicular murmur is heard but feebly. Vocal resonance is absent on both sides. Posteriorly a slight bulging of the right side is observed, and percussion over this part gives an absolutely dull note; the vesicular murmur is exceedingly feeble. The hepatic dulness merges with that of the pulmonary, but the inferior edge of the liver can be made out, about 1½ inches below the margin of the ribs, in the nipple line, and there is slight tenderness on pressure. Measurement of chest—from fifth dorsal vertebra to middle of sternum, right side, 15½ inches; left side, 15 inches. From eighth dorsal vertebra to lower segment of sternum; right side, 16 inches; left side, 15 inches.

Nov. 22. The patient cannot lie in bed, owing to a pain in the right shoulder, extending along the clavicle. The right arm is swollen, and the superficial veins congested. He complains of pain when the bones of the forearm are squeezed together over the inner edge of the ulna. The legs and feet are swollen and edematous. The dulness on the right side of the chest now reaches as high as the second rib, and nearly to

mid sternum.

Nov. 25. Breathing is now effected with much greater difficulty, and the patient's lips and hands are livid. He cannot assume the recumbent posture at all, but sits in a ward chair, and leans somewhat to the affected side. His urine was examined and found to be faintly acid. Spec. grav. 1025, with a slight mucous cloud; phosphates and chlorides normal. Neither albumen nor sugar was present.

Nov. 26. The patient is quiet, but the dyspnea continues.

About mid-day he died.

Post Mortem Examination.—Legs and hand dropsical. The left lung was seen to be collapsed; adherent at the apex and sides by old adhesions. On trying to inflate the lung, the air entered with difficulty. There was no fluid in either pleura, but the left pleural cavity appeared to have been occupied by air. The right pleura is adherent everywhere by old adhesions. In the left lung several masses of soft hæmorrhagic tissue of a malignant appearance are noticed. These resemble, to the naked eye, a sponge, containing in its meshes a sort of broken down tissue mixed with blood. In the right lung, nearly the whole of the lower lobe is occupied by similar tissue, in the form of a large mass with a capsule round it. This mass presents a coarse reticulated structure, the trabeculæ being pale, firm, and smooth, and the meshes containing broken down tissue and blood. The rest of the lung tissue is normal. Microscopically, the tumour presented the typical characters of a myeloid sarcoma. The bronchial and axillary glands, on both sides, are normal. The rest of the organs are also normal.

CURRENT TOPICS.

OUR PROGRAMME FOR 1879.

In issuing the first number of the *Journal*, in the enlarged form, we have to refer to our prospects during the year. It was anticipated by some that, with the increase in the amount of the annual subscriptions, there would be a large falling-off in the number of members. It is gratifying to be able to state that the falling-off has been much less than the lowest estimate, only 15 having withdrawn. When it is considered that a certain reduction in the existing membership is to be looked for at the

close of every year, to be made up by new members joining, this must be regarded as a very satisfactory result. An effort will now be made to increase the membership, and, if it is in any degree as successful as that of last year, it will very much more than cover this decrease.

Our readers will observe that we have added a department to the *Journal* for short reports of Hospital and Private Cases. The department of Medical Items has also been much expanded. As experience is gained in managing these two departments

they will no doubt become increasingly efficient.

In regard to original articles, we are able to place before our subscribers a very promising programme. The following gentlemen have intimated their willingness to contribute during the year, and some of them have specified the kind of articles they propose to give.

T. M'CALL ANDERSON, M.D., Professor of Clinical Medicine in the

University of Glasgow:—Clinical Notes.

THOMAS BARR, M.D., Aural Surgeon to the Dispensary of the Western Infirmary, Glasgow:—Papers on the Etiology of Ear Disease.

A. M. Buchanan, M.D., Professor of Anatomy in Anderson's College.

GEORGE BUCHANAN, M.D., Professor of Clinical Surgery in the University of Glasgow:—Surgical Notes.

J. P. Cassells, M.D., Aural Surgeon to Glasgow Royal Infirmary:— Reports on the Progress of Aural Surgery and Physiological Acoustics.

MATTHEW CHARTERIS, M.D., Professor of Medicine in Anderson's

College.

James Christie, M.D., Medical Officer of Health for Hillhead:—
The Spontaneous Development of Epidemic Diseases, with Special Reference to Cholera and Diphtheria.

H. E. CLARK, M.R.C.S., Eng., Dispensary Surgeon, Glasgow Royal Infirmary:—On Nerve-stretching in the Treatment of Tetanus.

John Cleland, M.D., F.R.S., Professor of Anatomy in the University of Glasgow:—Practical and Scientific Papers.

JOSEPH COATS, M.D., Pathologist to the Western Infirmary, Glasgow:—Paper on Descending Sclerosis of the Spinal Cord, &c.

John Dougall, M.D., Lecturer on Materia Medica, Glasgow Royal Infirmary:—Paper on Internal Hæmostatics.

EBENEZER DUNCAN, M.D., Surgeon to the Deaf and Dumb Institution, Glasgow.

Andrew Fergus, M.D., President of the Philosophical Society of Glasgow.

James Finlayson, M.D., Physician and Lecturer on Clinical Medicine, Western Infirmary, Glasgow:—Papers on Cases of Nervous Disease, &c.

W. J. Fleming, M.B., Lecturer on Physiology, Royal Infirmary School of Medicine.

Donald Fraser, M.D., Medical Officer, Riccartsbar Asylum, Paisley. W. T. Gairdner, M.D., Professor of Practice of Medicine in the University of Glasgow:—Clinical Notes.

Samson Gemmell, M.D., Assistant to the Professor of Medicine in the

University of Glasgow.

D. N. KNOX, M.B., Dispensary Surgeon, Western Infirmary, Glasgow. William Leishman, M.D., Professor of Midwifery in the University of Glasgow:—Obstetric Notes.

WILLIAM MACEWEN, M.D., Surgeon to Glasgow Royal Infirmary:—

Surgical Observations.

J. G. M'KENDRICK, M.D., Professor of Institutes of Medicine in the University of Glasgow:—Laboratory Notes, &c.

G. H. B. MACLEOD, M.D., Professor of Surgery in the University of

Glasgow.

D. C. M'Vall, M.B., Dispensary Physician, Western Infirmary, Glasgow:—A Paper on a Peculiar Heart Murmur.

Hugh Miller, M.D., Physician-Accoucheur, Glasgow Maternity Hospital:—Papers on Obstetric Subjects.

James Morton, M.D., Professor of Materia Medica in Anderson's College:—The Radical Cure of Hermia.

R. Scott Orr, M.D., Physician and Lecturer on Clinical Medicine in

Glasgow Royal Infirmary:—Clinical Notes.

ALEXANDER PATTERSON, M.D., Surgeon and Lecturer on Clinical Surgery in Western Infirmary, Glasgow:—A continuation of his Surgical Notes.

ROBERT PERRY, M.D., Physician and Lecturer on Clinical Medicine, Glasgow Royal Infirmary:—Clinical Notes.

THOMAS REID, M.D., Surgeon to the Glasgow Eye Infirmary.

W. L. Reid, M.D., Physician-Accoucheur, Western Infirmary, Glasgow:—Obstetric Notes.

J. C. RENTON, M.D., Extra Dispensary Physician, Western In-

firmary, Glasgow:—Notes on Surgical Cases.

ALEXANDER ROBERTSON, M.D., Physician and Superintendent, Town's Hospital and City Parochial Asylum:—Papers on Nervous Diseases.

J. B. Russell, M.D., Medical Officer of Health to the City of Glasgow.

Samuel Sloan, M.D., Assistant Physician Accoucheur, Glasgow Maternity Hospital:—Notes on Obstetric Cases.

A. Wood Smith, M.D., Physician and Lecturer on Practice of Medicine, Glasgow Royal Infirmary:—Clinical Memoranda bearing on Differential Diagnosis.

WILLIAM SNEDDON, M.D., Beith:—Supplementary Paper on Super-

numerary Nipples.

J. G. Wilson, M.D., Professor of Midwifery in Anderson's College: —Obstetric Notes. D. Yellowlees, M.D., Physician Superintendent, Royal Asylum, Gartnavel:—Asylum Notes.

John Young, M.D., Professor of Zoology in the University of Glasgow:—Papers on Biological Subjects.

CONTRIBUTION TO THE BIOGRAPHY OF DR. WILLIAM SMELLIE.—Mr. Alexander Duncan, B.A., the esteemed librarian of the Faculty of Physicians and Surgeons, in Glasgow, has kindly furnished us with the following interesting comunication:—To the edition of Smellie's Treatise on Midwifery, published by the New Sydenham Society (1876-78), there is prefixed an interesting memoir of this eminent obstetrician, from the pen of the editor, Dr. M'Clintock, of Dublin. In this it is stated, regarding Smellie, "Of his early life and medical education nothing is known, nor even where he obtained his medical degree." In a footnote it is added, "The registers of the Universities of Edinburgh, Glasgow, St. Andrew's, Leyden, Utrecht, and Aberdeen, have been examined with a negative result." Dr. M'Clintock, however, surmises that he may have obtained his degree from St. Andrew's, the registry of which is defective about this time. That Smellie at some period of his career obtained a University degree is shown by the "M.D." appended to his name in the title pages of his works. But it must have been late in his professional life before he obtained the doctorate; certainly several years after he settled in London. Under what qualification did he practise prior to his receiving the degree? This query we are in a position to answer. In turning over the Faculty Returns of the eighteenth century we unexpectedly came upon the entry of Smellie's admission to the membership of the Faculty as a Surgeon. This was in 1733, about thirteen years after Smellie had commenced practice in Lanark,* and six years before his removal to London. Lanark was within the bounds of the territorial jurisdiction of the Faculty as defined by their Charter. At that period it was incumbent on members, whether resident in town or country, to pay an impost called "Quarter Accounts," which were allocated for charitable uses. Smellie's name does not appear in the annual list of contributors from the year of his admission up to 1745. In 1739 he had removed to London, and, being now beyond the Faculty's jurisdiction, there was no obligation on him to pay the tax. But in 1745 he paid the eleven years' arrears, and continued his contribution yearly up to 1749. In the latter year there is an entry, of date 4th September, "Dr. John

^{*} For about a dozen years he must have practised without a qualification—no uncommon thing in those days.

Gordon paid to Collector Four Pounds Scots due to the Faculty by Dr. William Smellie, of London, for the current year, and the three succeeding years." Previous to this time he is styled "Mr. William Smellie, Surgeon," so that this entry in 1749 fixes approximately the date of his receiving the degree of M.D.

In subsequent years the quarter accounts are slumped, and the names omitted; so that we cannot say whether he kept up his connection with the Faculty till his death, which happened

at Lanark in 1763.

Dr. John Gordon, referred to above, was a friend and correspondent of Smellie. He was a well known practitioner in Glasgow for nearly fifty years. He twice filled the office of President of the Faculty. Smellie, in one passage, acknowledges his professional obligations to him (Midwifery, New Sydenham Society edition, vol. ii, p. 252). Dr. M'Clintock, in his memoir, makes reference to a Dr. Smollett who communicated to Smellie one of his cases (case 2, vol. ii, p. 7), and surmises that this was the celebrated author of Roderick Random, and that the latter was the friend to whom Smellie submitted his work for literary revision. This supposition is doubtless correct. Smollett was Dr. Gordon's apprentice, and it was probably through his old master that the novelist made the acquaintance of the obstetrician. Dr. Gordon, we may also mention, had another apprentice (who was also subsequently his partner), who attained to literary distinction. This was Dr. John Moore, the author of Zeleuco, and other works, and father of Sir John Moore, who fell at Corunna.

We are glad to observe that the Managers of the Royal Infirmary have taken an important step in connection with a subject upon which the whole profession is agreed—the great advantage, indeed the necessity, of having at command a staff

of thoroughly trained nurses.

During the past year, Lectures on Medical and Surgical Nursing were delivered at the hospital, both to the Day and Night Nurses, who attended in large numbers, and showed an interest in the movement, and an anxiety to learn, that were most conspicuous. The Managers have accordingly resolved to place the undertaking on a more definite basis, and have arranged that a course of lectures shall be delivered during the winter months to the night nurses, and a similar course, probably in summer, to the day nurses. Ladies and nurses not connected with the hospital are also admitted at a fee of one guinea. The medical lectures are delivered by Dr. J. Wallace Anderson, and the surgical, by Mr. W. J. Fleming, both on the staff of the hospital.

REVIEWS.

Clinical Manual for the Study of Medical Cases. Edited by James Finlayson, M.D., Glasgow. London: Smith, Elder & Co., 1878.

ALTHOUGH many books have appeared within the last few years, written for the purpose of facilitating the study of medicine, yet students, and those engaged in the instruction of students, must have felt that there was still wanting a comprehensive guide to clinical work. It is not enough that he who is going to undertake the treatment of diseases should simply be taught the various signs by which they become manifest; he must be also taught how he may best ascertain the presence or absence of these signs, and he must be

taught, too, their varied interpretations and indications.

Hitherto the student has, for the most part, derived his knowledge concerning the proper method of examining patients from oral instruction, conveyed by the clinical teacher, aided by certain bare and uninviting "Instructions for note taking," and by hints from books on systematic medicine. But the ever increasing multiplicity of detail relating to complete medical examination, renders the thorough clinical instruction of any large number of students, orally, a matter of extreme difficulty, even in our best appointed Universities and Schools. The few manuals hitherto published with the intention of aiding the student in dealing with these clinical details have so lacked completeness, that they have not greatly contributed to remove the difficulty. A book has been required which should not only set forth the method and order in which the symptoms of a patient may be best elicited, but should also point out, clearly and fully, the meaning and bearing of the symptoms met with.

Dr. Finlayson's book will, we believe, in a large measure, remove this want. The information it gives will greatly help students in investigating and understanding the phenomena presented by disease, whilst, where it is used by the students, the clinical teacher will be saved the wearisome iteration of those numerous minor, but essential points which have to be impressed on all who are studying practical medicine. The Clinical Manual contains the contributions of several eminent teachers and writers, and is edited by Dr. Finlayson, to whom, also, we owe the major and essential part of the book—

that relating to the systematic examination of patients. Gairdner treats of the physiognomy of disease. Dr. Samson Gemmell of the physical diagnosis and the use of the sphygmograph. The symptoms relating to the diseases of women, and mental disorders, have been dealt with by specialists in these departments—Professor Stephenson and Dr. Alexander Robertson. Dr. Coats gives a short account of the methods of making post mortem inspections, and contributes, also, a chapter on diseases of the throat and laryngoscope. The different writers have, in the main, followed one uniform plan. They point out the symptoms of disease which are to be looked for in the various regions and systems of the body, and the methods to be employed in looking for them; they indicate the value of these symptoms and the fallacies to be avoided in their observation; they explain their natural associations with other symptoms, and describe shortly the main features of the ailments of which they are signs. The Clinical Manual is, as its name implies, specially adapted for the student who is working in the wards of an hospital, and by no means takes the place of works on systematic medicine.

A book in which the articles are contributed by those specially conversant with the subjects on which they write, has, doubtless, the advantage of power in its several parts, for, ceteris paribus, he imparts information best who knows his

subject most thoroughly.

But difficulties not unfrequently follow from a multiplicity of contributors. One article is apt to differ from another in aim and amount of detail, and different writers may go over the same ground, or even clash. The care with which the authors of the several articles have subordinated their special subjects to the general plan of the work has, to a great extent, obviated the first disadvantage, whilst in only one instance do we note a twice told tale, the physical signs of ascites being given in two places. A third disadvantage which the combination of authorship involves, is perhaps hardly so well avoided. Subjects usually considered together are treated in different parts of the book, and students may be somewhat puzzled in consequence; but the copiousness of the index and references will, we believe, quickly help them out of any difficulties they may experience.

Dr. Gairdner's opening article, on the physiognomy of disease, is one well worthy of perusal by practitioners as well as students. He deals with the subject in that vigorous manner which characterizes all his writings, and sharply brushes away the cobwebs with which ill defined words are apt to obscure

facts. The use of such words as temperament, diathesis, cachexia, so frequently used by reporters of cases, he specially objects to, and rightly so; they are too often used in such a manner as rather to hide facts than aid description. The relation of temperament to disease, Dr. Gairdner says, is almost wholly illusory, whilst diathesis he regards as an "inference from previous facts in the history, indicating deranged physiological functions, or from manifest structural changes, the result of these; whereby we are able to establish, but only as a presumption founded with more or less probability on the evidence, the existence of a tendency to similar changes, or changes of some allied order in the future." To note the detail of positive facts, not to grasp at hasty generalizations, Dr. Gairdner says, should be the object of the clinical reporter when engaged in observing the physiognomy of disease.

Dr. Finlayson, in his account of the method of examining and reporting medical cases, adopts, as a basis, the scheme followed by Dr. Sanders at his clinique at the Edinburgh University. After the reporter has ascertained the general features of the illness by questioning the patient as to his complaints, the previous history is directed to be taken, and then the account of the state of the patient at the time of admission, the symptoms relating to each organ being dealt with in turn, beginning however, with the organ or system

which seems mainly affected.

Exception may be taken to every scheme which can be proposed, for, as Dr. Finlayson says, in speaking of the examination of patients, "no one method can be actually applied in all cases; indeed, no one method could possibly be the best if used indiscriminately." But the student has to be supplied with one form according to which he may mould his examinations and reports; and, on the whole, the one selected

by Dr. Finlayson seems to be the best.

In explaining the methods of investigation, however, our author avowedly does not follow the order of the scheme for reporting, with which he prefaces his division of the clinical manual, and we fear that this want of correspondence may lead to some confusion on the part of those who use the book, especially junior students. The symptoms relating to the circulatory system, for example, are not treated consecutively. The varieties of the pulse in disease are noticed in an early part of the work in connection with temperatures and pyrexia—a short but clear description of the use of the sphygmograph and its main indications being appended. The subjective symptoms

due to cardiac disease are considered, together with those arising from lung disease, towards the middle of the book; whilst the physical signs observed in heart affections are described by Dr. Gemmell towards the end of the volume, and several other instances of the divorce of subjects usually treated of, and re-

ported upon together, might be given.

We have not space for a detailed criticism of each of the sections into which Dr. Finlayson divides his contributions, but we may say that all the information he gives is practical, and exactly of the kind which a student requires for the thorough examination of a patient. No words are wasted, yet clearness is not sacrificed. Speculative opinions which are apt to confuse students are abstained from, but the newer views—such of them at least as have been fairly substantiated, as a rule, find place. Perhaps the most notable exception to this statement is met with at page 166, where late rigidity in hemiplegia is said to depend on changes induced by contraction of nervous tissue during the cicatricial process, no allusion being made to the sequential secondary changes in the lateral tracts of the spinal cord described by Charcot, which are doubtless intimately connected with the occurrence of late rigidity.

The chapters on the method of taking the previous history and on the external examination of a patient, are exceedingly clear and well put together; those on the special organs of sense and the nervous system, though very complete and abounding in information invaluable to the student working at nervous diseases, want the clearness of arrangement which

we meet with in other sections.

The intrinsic difficulties of the subject are, no doubt, a principal cause of this want; but it seems also in part due to the attempt to separate the description of the methods used in the examination of an organ from the subjective sensations depending on its disorders. Thus, the methods of examining the eye, including some very useful tables relating to the action of its muscles, are given at pp. 118 to 136; but disorders of vision are not arrived at till we come to p. 147, an account of the diseases of the ear and nose, and of the modifications of the sense of taste and common sensation, intervening.

The disorders relating to the circulatory and respiratory systems are advantageously dealt with in the same section, and special divisions of it are devoted to the causation of hæmorrhage and the examination of the blood, the methods now adopted for the accurate enumeration of the corpuscles being described at length. One or two omissions may be noted in this section; thus, for example, attention is not directly called

to the difference between inspiratory and expiratory dyspneea, but, as a rule, the student will find here all the information which he requires in his examination of the heart and lungs, except, indeed, as regards the physical signs, for which he must refer to the end of the book.

The disorders of the digestive organs are shortly but clearly described, the various changes which are to be looked for in the tongue, gums, teeth, being pointed out, and the alterations which may occur in the functions of the stomach and intestines set forth, as well as the indications presented by the fæces. Several pages are devoted to a full account of phenomena which are to be looked for in connection with vomiting, the causes of which are detailed.

A special chapter is devoted to jaundice and dropsy, a very complete account being given of the circumstances under which they arise, though very properly the question as to their ulti-

mate causation is not entered upon.

The chapter on urinary diseases contains one of the most complete and lucid accounts of the methods used in the examination of the urine we have met with, but the symptoms which point to disease of the urinary organs, apart from the indications presented by the urine, are disposed of in a somewhat summary manner. Renal colic, which is passed over with a bare allusion, might perhaps have advantageously received a fuller notice, since we do not remember that it is more than

incidentally mentioned in any other part of the book.

Professor Stephenson's article on disorders of the female organs is in every way in excellent keeping with the general plan of the work, and is thoroughly adapted to the wants of students. The main points which have to be known in connection with these disorders are well set forth, but he has wisely avoided minor details. His hints with regard to the manner in which inquiries and examinations have to be made, will be found of considerable value to those for whom they are intended, and the student who has carefully read this chapter will be far better fitted for acquiring information when he begins work in the gynocological wards, than if he entered on his duties with all to learn.

That part of the Clinical Manual, devoted to an exposition of the signs observed in the physical examination of the chest and abdomen, is somewhat incomplete as compared with other portions of the book. The information given is well put together, and good as far as it goes, but many details are wanting. In treating of the various peculiarities of chest formation, for example, the pigeon breast, and the rachitic and

barrel shaped chest, are alone mentioned, all allusion to the alar, flat, and transversely constricted chest being omitted. Nor is any sufficient account given of the depressions and prominences sometimes met with in health, which a student ought to have in his mind when he examines a chest. The appearance of the intercostal spaces, too, on inspection, is not described, nor is any mention made of the changes in the relation between expansion and elevation, which should be looked for when the chest is inspected during respiration. the paragraphs on auscultation and percussion too, many points are passed over, which ought, we think, to have been dwelt upon. It is true that the information here wanting may be readily obtained elsewhere, and this, we suppose, is the cause of its omission, but it seems to us natural that a book devoted to clinical work should contain at least as full an account of physical signs as the ordinary text books on medicine. second paragraph, on page 477, seems to be somewhat misleading. In the previous paragraph, bronchial and tubular breathing are spoken of as separate sounds, though differing only in degree; but in the one to which we wish to call attention they seem to be looked on as identical, and the statement is made that bronchial or tubular breathing may be heard in the healthy subject over the trachea and large bronchi, and in certain forms of disease over the spongy lung. This is an opinion certainly not usually held.

The section which deals with the physical examination of the heart is more complete than that in which the physical examination of the lung is considered, but here, too, much important information might, with advantage, be added. In speaking of reduplication of the second sound, for example, it would have been well to note its frequency in connection with auricular systolic murmur. As it is, the student can only indirectly arrive at this knowledge from the general statement that tension in the systemic or pulmonic circulation may pre-

dispose to it.

Dr. Gemmell's description of the area of superficial cardiac dulness will, we think, be apt to confuse students, since it differs from that met with in most other works. If by superficial dulness is meant the absolute dulness produced by the recession of the left lung from over the heart, the area which is described by Dr. Gemmell is certainly too large. Sibson, Walsh, and, in fact, most other writers, give the fourth, and not the third costal cartilage as the level at which the superficial cardiac dulness begins, and the area represented in the text and in the illustration at page 486, is certainly not in

size or form what is usually understood as that of the super-ficial cardiac dulness.

Dr. Finlayson has, we think, done wisely in inserting the chapter on electrical instruments, even though it differs somewhat in scope from the rest of the work, since it relates to treatment as well as to diagnosis; but treatment by galvanism is often a means of diagnosis, and it is well that a clinical manual should contain all the information necessary for clinical work. The introduction of Ziemssen's plates of motor points is a valuable addition to this chapter.

The article on insanity, by Dr. Alexander Robertson, gives completeness to the manual, and will aid the student in forming an opinion as to the mental condition of many of those doubtful cases which are found in the wards of a general hospital. Its study, too, will help him greatly in the psychological work which he will, probably, at some time, take up in the wards of

an asylum.

The chapters contributed by Dr. Coats alone remain to be mentioned. His articles on diseases of the throat and laryngoscopy is extremely clear and concise, and will prove of much service to the student. The directions which he gives as to the best method of making a post mortem will also be found very useful.

It has been impossible to do more than indicate the general character of the *Clinical Manual*. It contains an immense amount of information on every subject which is studied in the clinical wards, and is by far the best book hitherto written for the purpose of aiding students in their practical work.

Eighty-five illustrations have been introduced, for the most part taken from the works of Gairdner, Gee, and Roberts. We hope that in a future edition it may be found possible to illustrate the work still more profusely, without increasing its size or cost; its utility to students would thus be greatly increased.

The editor is to be congratulated on having produced a book so free from typographical and other errors—the only slip of any note we have observed being the inversion of one of the sphygmographic tracings at page 68.

A Handbook of Therapeuties. By Sydney Ringer, M.D. Sixth Edition. London: H. K. Lewis, 1878.

This edition of his popular handbook is the last issued by Dr. Ringer, as Professor of Therapeutics in University College. Many of our readers have, no doubt, observed that the author

has been promoted to the chair of Practice of Medicine in the same school.

It is scarcely necessary to notice at any length a handbook which has found such favour, not only with students, but slso with practitioners. It is well known that it deviates considerably from the old lines hitherto followed in most of the orthodox manuals, and introduces a good many novelties, not only as regards drugs but little known, but also as regards the mode of administration, and the selection of remedies; for example, the prescription, now well known, of drop doses of ipecacuanha wine every hour, or three times a day, in cases of vomiting (which raised such a cry of homeopathic heresy), or the administration of the sixth of a grain of gray powder every hour, in infantile cholera. But we need not go into this old controversy: fortunately, the practice of medicine is untrammelled by creeds or orthodox supervision, and every one can promulgate doctrines, and practise methods which he thinks to be useful, if they are found to be consistent with morality, to be honestly held, and to be carried out with openness and fair dealing.

This present edition, however, contains some new portions regarding salicine, muscarine, and pilocarpine (the two last being respectively the active principles of poisonous fungi and

of jaborandi).

The chapter on salicine, salicylic acid, and salicylates gives details of experiments to determine their influence on the normal as well as on the febrile temperature; and we notice that Dr. Ringer seems to have experimented on children after their recovery, who might be regarded as practically healthy. We confess to a feeling of aversion to experiments of this kind, and would prefer to see them carried out on the persons of the observers themselves, or volunteers of an adult age.

The copious "index of diseases," with references to the various remedies employed, given at the end of the volume, greatly facilitates the consultation of such a book; this is, no doubt, one of the reasons why the work is so popular in the profession; after exhausting all his known remedies the practitioner will usually find some further addition to his repertory

by turning up Dr. Ringer's handbook.

The Antagonism of Therapeutic Agents, and what it Teaches. By J. Milner Fothergill, M.D. London: Macmillan & Co., 1878.

This little volume consists of the essay to which the Fothergillian gold medal of the Medical Society of London was No. 1. E Vol. XI. Reviews.

awarded in 1878. In chapter iv, the influence and use of digitalis is discussed in fuller detail than in the MS. essay. Dr. Fothergill's Essay on Digitalis is now out of print, and this resume of his views on this important drug may be found useful by those who desire to consult the original work and are now unable to procure it.

The author gives, in his first chapter, a short account of the experiments conducted by various observers, as to the antagonism of different medicines. Amongst these, the well known researches of Fraser on Calabar bean, occupy a prominent place. Belladonna, opium, chloral, strychnia, coculus indicus, digitalis, aconite, jaborandi, hydrocyanic acid, and nicotin, are

among the drugs dealt with in these experiments.

In subsequent chapters an attempt is made to apply the knowledge thus gained to various morbid conditions, and to cases of actual poisoning occurring in ordinary practice. In this last department information culled from experimental researches promises to be of some value, although, in many cases, the experimenters found that the antidote required to be given before the poison to secure the antagonism, or to be administered so promptly that ordinary cases of poisoning can scarcely be dealt with satisfactorily in this way. But in therapeutics the attempt is now being made by some to produce powerful beneficial effects on the system by the administration of large, and almost poisonous, doses of certain medicines, while counteracting their influence in certain dangerous directions by the simultaneous administration of antagonistic remedies.

It will thus be seen that this little book contains an interesting digest of the various experiments and observations on these subjects. It may be consulted with advantage by those who desire to keep themselves informed on the action

of these powerful remedies in combination.

Contributions to the Physiology and Pathology of the Breast and its Lymphatic Glands. By Chas. Creighton, M.B., Demonstrator of Anatomy in the University of Cambridge. With Illustrations. London: Macmillan & Co., 1878.

This work is the production of a persevering and thoughtful observer, and, after a careful perusal of it, we can say that, if it does not revolutionise the views held as to the development of the mamma and its tumours, which is the aim of the writer, it will, at least, give rise to much renewed enquiry and obser-

vation. It will be our endeavour here to indicate the points in which the author differs from the prevailing views, and in order to this, it will be necessary to refer at some length

to his statement of the physiological problem.

The condition of the breast during lactation is taken as that of full development, both of structure and function. At that period the acini are lined with a well formed epithelium, which rapidly secretes the milk, the secretion here being a process analogous to endogenous cell formation. During lactation there is a successive renewal of the epithelium to supply the place of that which is lost in producing the milk. After lactation is over there is not a sudden cessation of the function of the gland; milk is no longer produced by the epithelium, but, during the subsidence of the function there is a continuous renewal and throwing off of the epithelium, the epithelium thrown off being described here as waste products. At first, the waste products are vacuolated cells, exactly like the colostrum corpuscles, but as time goes on successive changes occur, the last form being large yellow granular cells. Along with these changes in the waste products there are changes in the epithelium lining the acini which produces these. During lactation it is composed of well formed pavement cells, but there is a progressive deterioration, till, when the resting state is reached, the acini are lined with little else than a somewhat irregular heap of naked nuclei, in size little, if at all, larger than the nucleus alone of the perfect epithelium.

Such is the process of involution, or upfolding of the gland. The process of evolution, or unfolding in preparation for a fresh lactation is just the reverse of this. The imperfect epithelium begins to produce the imperfect waste products in the form of the yellow cells. There is a gradual improvement in the epithelium which produces more and more perfect waste products. Not long before lactation the waste product is a vacuolated cell, giving origin to a mucous fluid, which may be in

part discharged by the gland ducts at the nipple.

There is thus, before lactation is effected, and after it has ceased, a great production of cellular waste, and the question occurs, How is this disposed of? The author believes that it is mainly got rid of by the lymphatic system. It is an important observation, that these cellular waste products find their way out of the acini into the surrounding connective tissue, and thence into the lymphatic channels and the glands. The yellow cells, from their colour, are most easily traced in their migrations, and there seems to be no doubt that they are often more abundant outside the acini than inside, and that they

pass in large quantities to the lymphatic glands. While still in the connective tissue of the gland these waste products may very readily be taken for cells of the connective tissue, especially when unpigmented. In fact, there are some illustrations here of collections of spindle shaped cells in the inter-acinous tissue, which would almost universally be taken for rudimentary connective tissue cells. The importance of this will appear farther on.

Arrived at the lymphatic gland, the waste cellular products are stripped of their special characters, they are denuded and pass into the parenchyma of the gland to take up their position

as simple lymphoid cells.

These views make, undoubtedly, a serious enough inroad on received opinions. It is an unexpected thing to find epithelial cells or their derivatives wandering through the tissues, and finding their way to the lymphatic glands. It is quite consistent with the boldness of his position that the author hints at the possibility of partly accounting for the increased number of white blood corpuscles which occur during pregnancy (leucocytosis), by the additional supply of lymphoid cells from the

conversion of these waste products.

Looking to the unusual career of these epithelial products, we can hardly be surprised to find that, in studying the development of the breast, the author has come to the conclusion that the acini are not developed out of the epithelial layer of the embryo. The received view of the development of the breast is, that it arises by a recession or inversion of the surface epithelium. He does not seem to deny this mode of development for the ducts of the mamma, but in the case of the acini he looks on the origin as entirely different. The ducts are first developed, and it is believed that the acini are, as it were, added on at a subsequent period, being a product of the mesoblast. The author makes out a curious analogy between the development of the mamma in the guinea pig and the development of the inquinal fat bodies in the kitten, and the general results of his observation are, that the mamme are highly specialized fat lobules.

Such being a brief sketch of the author's physiological views as to the breast, it is not difficult to understand his pathology. The author has studied the tumours of the mamma occurring in the bitch, and has also examined a few human mammary

tumours.

In studying the marginal parts of these mammary tumours, it was obvious that while the gland as a whole was in the resting state, the first step towards the formation of a tumour was

like the first stage in the evolution of the breast, that characterised by the formation of the large yellow cells. There were some cases in which the whole tumour represented this stage, as if prolonged and exaggerated. The yellow cells in these cases were accumulated in the acini, and even formed papillary projections from the epithelium of the acini. The tumour in this case could readily be identified as a kind of spurious attempt at the evolution of the breast. But there were other cases in which the yellow cells were not contained only within the secreting structures, they were met with in rows outside. in the connective tissue, giving an appearance highly suggestive of that seen in many cases of scirrhous cancer, the characters of the cells alone being different. Although the cases in which the yellow cells take part in the process are the easiest to study. yet it will be understood that the development of tumours does not concern this stage alone. There are cases in which epithelium of various kinds is formed in the exaggerated way already described. So far as such tumours are concerned, the tumour formation is primarily a disorder of function, the disorder consisting in the persistence and exaggeration of a stage in evolution which is normally a transient one.

It is more difficult to explain those tumours in which either inside the acini or outside there is a mucous formation. There is the intra-acinous myxoma, and there is the more ordinary myxoma and myxo-sarcoma. The author, however, has an explanation for these as well. In the evolution and involution of the breast there is a period in which a mucous fluid is produced as part of the waste products. As this is, like the other, a transient stage, there is no production of the typical tissue of the mucous gland. But in certain tumours this stage is the one which is prolonged and exaggerated. In that case the acini are lined with columnar epithelium with the nucleus near the base, just like that of mucous glands, and these cells produce mucus which is confined in the acini. Thus are produced the intra-acinous myxomata. But these mucous secreting cells may, like any of the others, pass out of the acini, and having gone into the inter-acinous tissue, they may proliferate and go on secreting mucus. By the multiplication of these cells the myxo-sarcoma is accounted for. The author, likewise, has

little difficulty with the cartilaginous tumours.

It is to be observed that these rather startling positions are maintained with no small force, and are illustrated by drawings of apparent fidelity.

The last subject taken up is the tumour infection of the lymphatic glands, and here the positions taken up are equally new.

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When secondary tumours are formed in the lymphatic glands from growths in the mamma, the new tumour is a reproduction in its structure of the original one, and this applies to the finest details. The author believes that the secondary tumour is, as it were, carved out of the proper tissue of the gland, its elements undergoing a transformation into the tumour tissue. The agents in this transformation are the waste products carried from the tumour to the gland. We have seen that in the normal evolution or involution the waste products pass to the lymphatic glands, and so in the pathological processes of tumour formation there is a similar migration. When the products are the yellow cells their action can be best observed. They seem to infect or influence the glandular tissue in a more or less

rapid and complete way.

We are not prepared to accept any of these views from the author, but at the same time, we do not feel altogether in a position to reject them. It is just possible that, with some little trimming, the facts he has observed, may be brought more into harmony with current views. One essentially weak point in his theories is the view which can be regarded as little better than an assumption, that the acini are not developed from the epithelium. He himself states that as the ducts are first formed it is difficult to prove that the acini are not developed from them, and, confessedly, he can only make out a parallelism between their development and that of adjacent fat lobules. Equally liable to criticism is the view that the cells from the tumours produce secondary tumours in the lymphatic glands by influencing the glandular tissue, and not to any material extent, by becoming themselves the parents of the new growths. This must be a matter very difficult to decide, and the facts known may possibly bear either interpretation. Making these two modifications in his theoretical results, the cancers of the mamma would remain conditions in which the epithelium has taken on an exaggerated and extraordinary development. passes out from the acini, and sends processes among the tissues, these processes finding their way most readily along the lymph canals. Portions readily pass to the lymphatic glands where they proceed with a similar development.

REPORTS OF HOSPITAL AND PRIVATE PRACTICE.

It is proposed under this heading to bring before the notice of our readers short reports of cases in the Royal and Western Infirmaries, as well as cases, which may be sent to us, from Private Practice.

It will be our object to report not merely unusual cases, but rather those which illustrate the general practice of the hospitals, and the various methods of treatment adopted. We believe that by such a plan the reports will be found interesting and instructive to those who are unable to follow, more closely, the work being done in our hospitals by many, it may be, of their old teachers and friends. We hope, also, that our readers will furnish, from time to time, brief notes of interesting cases which may occur to them in the course of practice, and which may be properly included under this heading. Observations of a more elaborate kind will take their place as Original Articles.

GLASGOW ROYAL INFIRMARY.

UNDER THE SUPERVISION OF DR. J. WALLACE ANDERSON.

FROM DR. SCOTT ORR'S WARDS.

MEDULLARY CANCER OF KIDNEY IN A CHILD SIX MONTHS OLD. POST MORTEM.—T. W., æt. 6 months, admitted November 2nd, 1878, a healthy looking child till within a few weeks of admission, when he commenced to vomit green biliary looking matter. This passed off, but about eight days before admission the mother noticed abdomen somewhat swollen, and this swelling rapidly increased. On examination, Dr. Scott Orr discovered a round fluctuating tumour in left flank, dull on percussion, and about three inches in diameter. It had all the appearance of a large cyst connected apparently with the kidney, and he proposed to puncture it with a fine trocar, but was dissuaded from doing so on finding that the opinion of his colleagues was against it. The child became gradually weaker and died on the 19th November.

Dr. Foulis made a post morten examination and reports: Body fairly nourished, and not at all emaciated. . . . Abdomen very much distended and semi-fluctuant; no dropsy. On opening abdomen a large, full, rounded tumour is seen on left side of belly, about the size of a child's head; over its middle runs the descending colon, which is firmly attached to the tumour, and sessile upon its surface. On removing the tumour carefully, with its capsule, it is found to be in close connection with the left kidney. The left ureter enters the lower and inner part of it, and near this part there is an appearance as if the kidney substance were spread out upon the surface of the tumour for some distance. The left suprarenal capsule is of normal structure, and is not in any way involved. The tumour, being entirely separated, weighs 2 lbs. 2 oz., and its consistence is that of a very fluctuent soft mass. so much so, that it was considered to be a cyst till cut into. when it was observed to be composed of soft cancer tissue of a vellowish and gravish colour, and containing a few small cysts. The tumour appears to have commenced in the interior of the kidney, and to have grown rapidly as from a focus, the remainder of the kidney tissue being distended by it so as to form an imperfect capsule over about a third of the tumour surface. There is, besides, a distinct capsule of thin fibrous tissue round the tumour, and the remainder of the kidney tissue can be peeled off the surface of the capsule. point characteristic of many cases of soft cancer which are distinctly encapsuled, even when rapidly growing, and destitute of stroma in their interior.

The microscopic structure is entirely cellular, with a considerable quantity of intercellular juice. The cells are small, very granular, many of them broken up, and the tumour in places seems to consist of merely granular débris. There is no stroma properly so called.

The other organs present nothing noteworthy.

FROM DR. DUNLOP'S WARDS.

CANCER OF MAMMA—EXCISION—HEALING BY FIRST INTEN-TION.—Mrs. G., act. 44, admitted to ward 23, October 16, 1878, suffering from scirrhus of mamma, of eight months' duration. She was five months' pregnant at the time of her admission, and after her strength became somewhat improved by generous diet and tonics, the operation of excision was decided upon, and performed by Dr. Dunlop, Oct. 23.

The disease was limited to two distinct hard masses which

felt as if they were imbedded in the gland. They were quite free and moved readily with the gland over the pectoral muscle below; the tissue, however, round the nipple seemed to be implicated in the disease. In the axilla were two small and distinctly enlarged glands; these were not high up in the space, but were situated not far distant from the border of the mamma itself. The operation, which was conducted under the spray, consisted of a long, oblique incision, from the lower end of the sternum upwards, the two enlarged glands were easily got at, and removed along with the mammary tumours. There was little bleeding, and the edges of the wound readily came together, although the skin around the nipple was removed.

The patient rapidly recovered from the shock of the operation and from the effects of the chloroform, and in the course of a few days there was a marked improvement in her general health. The wound was only dressed four times. It healed by first intention, almost throughout its entire extent, and the stitches were removed, and the further use of the drainage tube omitted, at the second dressing. A few strips of adhesive plaster was all the dressing required, and the patient returned home at the end of the third week after the operation had

been performed.

Microscopic examination confirmed the view that had been entertained, that the tumours in the mamma were of a malignant character; but the two glands removed from the axilla showed no signs of cancer; they appeared to be simply enlarged from irritation. It will be interesting to watch the further history of this case, with the view of ascertaining what degree of immunity from the disease will have been afforded by what has been so far a successful operation.

STRANGULATED HERNIA—OPERATION—BOWEL DISCOLOURED—RECOVERY.—J. H., æt. 27, fireman, was admitted to ward 24, November 5, 1878, suffering from a strangulated hernia on the right side. Patient had had a rupture for several years, and constantly wore a truss, but, owing to the defective nature of the appliance, the rupture came down frequently. It came down the day before admission, while the patient was at his work, and as he was unable to return it himself, as usual, he was assisted home, and medical assistance called in. Efforts to reduce the hernia proving unavailing, he was sent to the infirmary on the evening of the 5th, suffering from severe pain, considerable swelling, and constant stercoraceous vomiting. Taxis under chloroform having been used unsuccessfully, Dr. Dunlop was sent for, and he operated at once. The contents

of the sac were intestine, and some dark coloured fluid, the stricture was very tight and the bowel had sustained some

injury from it.

Although of a dark colour, it was resolved to return the bowel, which was easily effected after the stricture had been divided. After the operation a quarter grain morphia suppository was given, to be repeated every four hours. Patient had a fair night, and did not suffer from sickness. There was some purulent discharge from the lower end of the wound, and some irritation of the right testicle. This, however, soon disappeared; the bowels were moved naturally on the sixth day; on the whole, he made an excellent recovery, and was dismissed, cured, November 30, 1878.

STRANGULATED FEMORAL HERNIA—OPERATION—REMOVAL OF PIECE OF OMENTUM INJURED BY TAXIS—RECOVERY.—Mrs. D., æt. 48, was admitted to ward 23, October 1, 1878, suffering from strangulated femoral hernia. Patient stated that she had had a rupture for five years, but had always been able to reduce it herself, until the present occasion, when it had come down three days before admission, and she had been unable to return it. Attempts had been made, for two days, by surgeons in the country, to reduce it by taxis, but without effect.

On admission, patient was suffering from frequent stercoraceous vomiting, hiccough, and severe pain, and was much exhausted. Another attempt at reduction by taxis was made under chloroform, but unsuccessfully, and, Dr. Dunlop being

sent for, decided on immediate operation.

On laying open the sac, which was done in the usual way, the contents were seen to consist of a considerable knuckle of intestine, and a piece of omentum the size of a closed hand. There was bloody fluid in the sac, and the intestine was of a blackish colour. It was behind the omentum, and it had

escaped the bad effects of the taxis.

The omentum itself had been very much injured. It was full of clots of blood, and its structure was so matted together, and its vitality so low, that, while the bowels were freely returned within the cavity of the abdomen, in order to be placed in the most favourable situation for recovery, a number of antiseptic gut ligatures were employed, the protruding injured omentum was cut off, and the stump restored to the cavity of the belly. Thereafter the edges of the wound were brought together in the usual way, and a drainage tube introduced.

A quarter grain morphia suppository was given soon afterwards, and patient passed a quiet night. No vomiting occurred, the pulse was good, and the temperature only slightly above normal. The wound was dressed on the second day, and was found to be looking remarkably well. Bowels were moved naturally on the fifth day. The patient's recovery was uninterrupted, and she was discharged, cured, on November 4; her dismissal being delayed for nearly ten days after she was perfectly able to go out, in order that she might be supplied with a truss.

FROM DR. MACEWEN'S WARDS.

AMPUTATION OF THE LEG BY LATERAL FLAPS—THE ELASTIC BANDAGE.—The operation was performed on an elderly man, for chronic ulcer over heel, which had become epitheliomatous. The amputation was through the lower third of leg, not by Teales' method, but by lateral flaps, as recommended by Langenbeck. There is thus, properly speaking, no anterior flap liable to perforation or sloughing from pressure of the tibia, nor heavy posterior flap by the weight of which this risk is increased.

For the arrest of hemorrhage an elastic band was applied. first from the toes nearly to the knee, and on the top of the upper margin of this, and also above it, a second bandage of a similar kind. The first emptied the limb of blood up to the second, which arrested the arterial flow. Dr. Macewen considers an elastic bandage better adapted for controlling hæmorrhage than the usual cord-like elastic ligature which has been known to cause sloughing if kept applied for some time. The arteries and some of the veins were tied with carbolized catgut. Not more than a couple of drachms of arterial blood were lost. Deep wire stitches were fixed by being passed through metal buttons perforated with two holes, one for each stitch, the stitches being then twisted the one round the other. The edges were brought together by carbolized silk ligatures, and the stump put up in antiseptic gauze. Carbolized water (1-40) was used for the sponges and instruments, the whole operation being done under spray of the same kind and strength.

WESTERN INFIRMARY.

Under the Supervision of Dr. W. G. DUN.

FROM DR. GAIRDNER'S WARDS.

DR. GAIRDNER has at present, and has had, during the last few months, a great variety of cases of nervous disease. A few of them are given here, and it is expected that reports of others will appear in future issues.

ALTERNATE HEMIANÆSTHESIA, WITHOUT EVIDENT MOTOR PARALYSIS, NEWLY ADMITTED.—D. M., aged 52, presents a very striking and unusual form of hemianasthesia. The entire right side of the body and limbs is very distinctly less sensitive than the left. There is no absolute loss of sensibility, but the extent of it may be judged from the fact that Dr. Gairdner was able to transfix the skin of the leg with a pin, without the man exhibiting any signs of pain, or even of distinct consciousness of what was being done. There is hemianæsthesia of the head, but it is on the opposite side from that of the body—namely, on the left side. There seems to be a distinct zone at which the change from one side to the other takes place, this corresponding in front with the margin of the part supplied by the fifth nerve, and behind with the first or second cervical vertebra. The left side of the tongue is very markedly anæsthetic, the hemianæsthesia corresponding to that in the head. As the patient has just been admitted, there has not been time to test the different forms of sensation, the remarks made applying to the usual test by pricking with a pin. The patient states, very positively, that he has no weakness in moving the limbs or in walking, and no difference can be observed in the grasp of the hands. His writing, that of an illiterate man, is not any worse than it ever was.

He refers his illness to an attack of pain beginning in the abdomen, but soon affecting the left side of the head. This pain was at times so severe that, in his own words, he thought he would be "driven to Gartnavel" by it. The pain began about seven weeks ago, and has continued more or less since, though now much abated. Treatment has been begun with large doses of iodide of potassium.

Dr. Gairdner expresses a wish that physiologists and others, who have given special attention to this subject, would inform him of any particular observations to be made on this probably unique case.

EPILEPTIFORM CONVULSIONS - HEMIPLEGIA - TRANSIENT APHASIA—SYPHILIS—IMPROVEMENT UNDER TREATMENT.—T. F., aged 38, affected with spasms, of which the following is the description of a severe one, occurring about a week after admission. It began at the tips of the fingers of the right hand, and extended gradually up the arm, and from that to the neck and head, twisting the head round to the right side (the head is always twisted to the right), in a series of jerking movements; from thence it progressed down the right side of the chest and abdomen, and finally the right leg became engaged in the twitching movements. The patient was conscious of the bowels and right testicle being involved. The attacks were commonly much milder than this one, being confined to the arm, and there has rarely been loss of consciousness. From the first, the attacks were followed by paralysis of the right arm, increasing up to complete disablement with marked tonic rigidity, and to a slight extent of the leg; at present the paralysis of arm is persistent, but greater immediately after an attack. After the more severe attacks there has been a temporary aphasia, lasting about twenty minutes. The date of the first attack was 6th December, 1877, and he has had altogether, within the year, nearly 300 attacks. There is a history of syphilitic antecedents, the primary affection being probably in 1860, no distinct account of secondaries, but discharge from the army in 1863, presumably for a syphilitic ulcer. Tertiary symptoms in March 1877, resulting in sinuses at occiput, and discharge of two pieces of bone, which leave at present gaps in the skull. There is probably here a syphilitic lesion affecting the surface of the brain, and irritating the convolutions in the left lateral region.

The treatment has consisted of iodide of potassium in 10 gr. doses, from 21st September to 5th October, then Donovan's solution, 15 min., latterly combined with bromide of potassium and ammonium. There has been very marked improvement,

the more severe attacks being now at long intervals.

admitted 2nd October, 1878, with paralysis of the right side, beginning four years ago in an apoplectic seizure. At first there was absolute speechlessness and paralysis of right side. There has been very gradual recovery of power of motion, and, even since admission, a distinct improvement in the speech, although, at present, it is still a typical case of amnesic aphasia. He evidently understands the uses of common articles, is able to appreciate the value of coins, and

readily indicates, by signs with his fingers, the number of spots on dominoes, which game he plays quite skilfully, as well as draughts, but there are very few words which he understands when uttered by another, and even after correctly indicating by signs the number of spots on a domino, he does not, in the least, understand the number when pronounced. There are, however, some words, the meaning of which he has acquired. As to his power of speech, he is able to utter his name, and a few other words which, however, he frequently mistakes. But all these seem to have been slowly acquired since the attack. On 25th October, he had a severe convulsive attack, with unconsciousness, but after recovery his condition seemed to be the same as before, in regard to paralysis and aphasia. The patient was at one time a soldier, and is stated to have been of intemperate habits, but, considering his condition, he is extremely intelligent and very helpful in the ward.

PARAPLEGIA WITH TREMORS, RESEMBLING DISSEMINATED SCLEROSIS.—P. M'E., aged 46, was admitted on 28th October, 1878. He is affected with a peculiar form of paralysis, chiefly exhibited in his gait; he walks for the most part on his toes, and with his body bent forward; at each step the foot is lifted with apparent difficulty, and the whole body more or less thrown into concussion or tremor. There is also a degree of festination. There is no proper dragging of the legs, and no marked unsteadiness or want of balance. There is distinct tremulousness of the muscles when any movement is attempted, but this is entirely absent when at rest. There is considerable interference with the movements of the hands. and the handwriting shows a marked degree of tremulousness. The muscular system is well developed. The muscles of expression appear to present a slight jerkiness in action, depending on tremor, though not at any time carried to the point of producing positive deformity of the face. The eyeballs are rather unsteady, with perhaps a slight tendency to nystagmus.

From Dr. Finlayson's Wards.

LEAD POISONING, WITH YELLOW DISCOLORATION OF SKIN AND CONJUNCTIVA—ICTÈRE SATURNINE OF M. TANQUEREL—RECOVERY.—The patient, a robust young woman about 20, was employed in a white lead work, and was admitted on Nov. 7th, with symptoms of lead poisoning—namely, colic, blue line on gums, &c. The special point of interest in this case was the discoloration of the skin and conjunctiva, symptoms not very often seen in cases of lead poisoning. M. Tanquerel, in

his work, entitled Traité de Plomb, has, however, drawn attention to this condition of the skin and conjunctiva in certain cases of lead poisoning, and has termed it "Ictère Saturnine." In consequence of sickness and persistent vomiting, which continued for some days after the admission of the patient, it was at first supposed that there was slight jaundice, particularly as it seemed there was pain and tenderness over the liver, but on further scrutiny it seemed doubtful if it was a true jaundice, as the urine contained almost no bile, or, at least, gave a very doubtful reaction with nitric acid; and, on a critical examination of the conjunctiva, the vellowness was seen not to be evenly diffused, as in ordinary jaundice, the portion near the cornea being bluish. On several occasions the patient had to leave the lead work, on account of her health, and she is quite positive in her description of the vellowness having persisted for the last two or three months, and of its coming and going according as she goes to the work or not. She says, indeed, that nearly all the workers become affected with the vellow discoloration of the eyes. The condition of the skin and conjunctiva seems to agree, therefore, with the Icterè Saturnine of M. Tanquerel.

As to treatment, the colic was much relieved by purgative doses of epsom salts, and later, iodide of potassium was given. During the progress of the case the patient had a pretty severe attack of arthralgia, the pain of which was relieved by subcutaneous injection of morphia. She was dismissed, well, on 26th Nov.; the skin had regained its normal colour, but the yellow tint was still present in the conjunctiva, though to

a less degree.

INTESTINAL OBSTRUCTION—PROTRACTED COURSE OF CASE—PROPOSED OPERATION—SPONTANEOUS ACTION OF BOWELS—LARGE DOSES OF MORPHIA—DIARRHEA—DEATH—POST MORTEM EXAMINATION—MALIGNANT DISEASE OF BOWEL.—The patient, aged 22, a native of Germany, and a sailor by occupation, was admitted on 7th Oct., at 3 p.m., suffering from severe pain in the abdomen, with a history of prolonged constipation. The bowels were slightly opened on 1st Oct., but had not been properly relieved for a fortnight before that time. He had been taking various forms of purgatives, most of which he vomited. The paroxysmal pains from which he suffered began on 29th Sept. There had been no bad vomiting, except in connection with the taking of physic; he had, however, been taking very little food for the last four days, as his stomach could not retain it. For three nights he had slept little, on

account of the severity of the pain. About four days before admission he seems to have become much worse, as, up to this time he was able to walk about to some extent. When seen on the night of 7th Oct. he was suffering from severe paroxysmal pain, occurring every ten minutes or oftener, during the paroxysms tense knots of intestine could be felt in the lower part of the abdomen, particularly on the right side. There was no very great distension of the abdomen, the percussion note was tympanitic, there was slight tenderness on pressure, and some sensation of gurgling in the right iliac region above Poupart's ligament. On careful examination of hernial regions no hernia could be detected; and on examination per rectum nothing was felt except general bulging from distended bowel.

On admission, a grain of opium was given, and fomentations applied to the belly; at 8 p.m. he had half a grain of morphia, repeated at 10 p.m. The pain lessened greatly, and he slept some. At 11 p.m. a large soap and water injection was administered; this was retained ten or fifteen minutes, but no feeces were brought away. On the following day, 8th Oct., he was ordered half a grain of powdered leaf, and half a grain extract of belladonna, in pill, every three hours. Morphia to be continued to the extent of keeping pain under. The vomiting increasing in frequency and amount, the administration of food and drink by the mouth was stopped, only ice to suck being allowed; the patient to be nourished by nutrient enemata. On 14th Oct, the belladonna was ordered to be given every six hours instead of every three, as formerly. Squire's Lin. Bellad. Co. had also been applied externally, by rubbing into the abdomen, but was discontinued as the rubbing seemed to provoke spasm. There being at this date little vomiting, the patient was allowed small quantities of liquid food. Large injections had also been given with the long tube introduced some distance up the bowel, but failed to bring away any feeces. On 16th and 17th Oct., however, the water which came away with the injections seemed to be slightly feecal, as judged by the smell.

The condition of the patient being very critical, a consultation was held on 18th Oct., but in view of the great uncertainty of the nature and position of the obstruction, and in view also of the serious differences of opinion among the surgeons,—the suggestions being to open the abdomen, and search for the obstruction, or to make a temporary opening into the bowel, either from the loin or the right groin—Dr. Finlayson decided not to sanction interference in the meantime, particu-

larly as the patient seemed rather better than on the previous day. The advisability of this course was justified by the subsequent progress of the case, for, on the evening of this day patient passed a small pultaceous motion; the injection administered some hours later produced no distinct motion however,

only coloured fluid coming away.

The case being of a very protracted nature, it is not possible to give a very detailed account of it. The belladonna was stopped on 22nd Oct., as the patient appeared rather confused, morphia being continued to the extent of subduing the pain. The injections up to 23rd Oct. were usually returned seemingly tinged with feeces, but at this date the injection given in the evening came away mixed with a quantity of distinctly feecal The patient felt better, and seemed, on the whole, easier. On 30th Oct. a small but distinctly feecal motion came away before the injection was administered, and from this date onwards the bowels have been relieved fairly well either naturally or by means of large injections. One feature of interest in the case is the large quantity of morphia which has been given subcutaneously without producing any symptoms of poisoning, the pupils remaining quite uncontracted. As much as 5 grs. of morphia have been given subcutaneously at one time, and within seventeen hours 19 grs., in doses varying from 3 grs. to 5 grs., the only effects being to subdue the spasmodic pains and quiet the patient. The belladonna might at first be supposed to have been the cause of the patient tolerating such quantities of morphia, but that this was not the case was shown by the continued tolerance after the belladonna was withdrawn. Great relief was experienced at times by the passage of wind from the bowels; the pain and abdominal distension abating. The patient felt as if the wind, rumbling in his belly, could not get down through the bowels. On Nov. 30th, the abdomen was so collapsed that the abdominal agra could be felt, but no tumour could be made out. The quantity of urine secreted daily has been pretty fair, large even when the small quantity of fluid taken is considered; on those occasions when large injections were retained for some considerable time, the quantity of urine was observed to increase.

On 8th December a new feature in the case was developed. Diarrheea set in and continued unabated till death, which occurred on 11th December. Opiate injections were tried, but without avail, as the patient had lost all power of retaining anything. Opium (Battley's sol.) was also given by the mouth, but without any result in the way of stopping the diarrheea. There was no vomiting. The abdomen still re-

mained relaxed, and at a point on the borders of the right iliac and lumbar regions there was discovered, a day or two before death, a small lump, perhaps about the size of a walnut. It could not be ascertained that this could be moulded by the impress of the fingers, as pressure on it caused a good deal of pain. It seemed, however, to be of an elastic nature, and to roll under the finger. The lump remained unchanged to the last.

Post Mortem Examination showed the existence of a cancerous growth in the caput ceecum, an epithelioma with colloid degeneration. The tumour was just at the border of the ileo-ceecal valve, but did not directly involve it.

FROM DR. PATTERSON'S WARDS.

MOVEABLE BODY IN THE KNEE JOINT-OPERATION-RE-COVERY .- F. C., joiner, aged 20, was admitted on November 29th, suffering from partial lameness, owing to the presence of a movable body in the left knee joint. About eighteen months ago, in lifting a heavy weight, he strained the left knee; no immediate inconvenience was felt, but next morning the knee was swollen, and about three days after, he felt something moving in the joint. For about a year he continued at work, the knee being visibly swollen all the time; but at last he had to give up work, as he could scarcely walk. On examination a firm body could be brought to the surface towards the inside of the anterior aspect of the knee joint, just below the patella. The body seemed freely movable, and was about the size of a bean. November 30. Dr. Patterson operated to-day. No chloroform was given, as the patient refused to take it. This proved rather advantageous, as the patient was able to bring forward the movable body himself, and fix it in position with his fingers. An incision about an inch and a half long was made over the seat of the foreign body, which was seized and pulled forwards by means of forceps, and its attachment severed by scissors. It seemed to consist of condensed cellular tissue, was lobulated and attached to the tissues of the joint by a short pedicle. A small quantity of synovial fluid escaped on opening the joint. All the customary antiseptic precautions were carried out during the operation, and in the subsequent treatment. A long splint was applied in order to fix the joint. The wound, dressed for the first time on December 3rd, was found to be looking well, there was no discharge. Three days later it was again dressed, and the stitches removed, union having taken place. On the 9th, strict antiseptic dressing was discontinued, boracic lint being applied. On the 12th, the

splint was removed, and the patient, it is expected, will leave the hospital in the course of a few days.

LITHOTOMY — RECOVERY.—The patient, a child of 6, was admitted on 13th November. For about two years he had had symptoms of stone, but for two or three months before admission there had been considerable aggravation of the symptoms. The pain complained of was always worst at night. On the day of admission, Dr. Patterson sounded and satisfied himself as to the presence of a stone, and on the 16th he performed the lateral operation, and removed a small mulberry calculus, about the size of a wren's egg. The staff used was the rectangular one of Dr. Andrew Buchanan. No tube was placed in the wound for the passage of urine. The case progressed very favourably, and on 29th November the patient was dismissed almost well, the urine having begun to pass by the natural channel.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1878–79.
Meeting III.—1st Nov., 1878.

Dr. Fergus, President, in the Chair.

I. TARNIER'S FORCEPS.

DR. ROBERT BELL showed Tarnier's Forceps, and demonstrated their action on a model. He stated that, in conversation with Tarnier, he had mentioned to him that the idea of the instrument was first suggested by his having on one occasion to attach a string to a pair of ordinary forceps. The advantages claimed for the forceps were, that it allowed the accoucheur to make traction in the axis of the pelvis; that it left the feetal head sufficient mobility to follow the pelvic curve; and that it provided an indicator to show in what direction the operator ought to make traction. He admitted that the

appearance of the instrument was calculated to create prejudice against it, which, however, would give way on trial. The last occasion on which he had used it was in the case of a lady, 37 years of age, a primipara. The parts were very rigid; and he was satisfied that he could not have used the ordinary forceps without great danger of laceration. By using Tarnier's instrument there was no risk of lacerating the perineum. Tarnier had kept the instrument on the head for half an hour without any bad effect, the child crying all the time.

Dr. W. L. Reid said that the idea on which the instrument was based was a good one; but there were two points liable to objection (1), the thickness of the blades ($\frac{3}{8}$ of an inch at the point where the head would be caught)—as a rule, if there were a space like this to spare, there would, probably, be no forceps required; (2), the compression screw, the application of

which would give rise to a risk of killing the child.

Mr. John Reid contended that the forceps should be as simple in construction as possible. The instrument exhibited would tend to confuse any practitioner; as it would certainly frighten the patient. It could not be used also without exposing the patient. The blades, as had been pointed out, were too thick. As regards the indicating power of the instrument, it was unnecessary, as the evolution of the head was always

felt by manipulation.

Dr. S. Sloan only regretted that Dr. Bell had not given them a paper on the subject. On his first reading about Tarnier's forceps he was rather prejudiced against it. Atthill had tried the forceps in several cases, and, in a paper, he admitted that it answered the requirements of Tarnier; but he brought a great many objections against it, and ended by saying that he would not ask any one to try it. After examination, however, it appeared to him that most of Atthill's objections vanished. He did not see much force in Dr. W. L. Reid's objections as to the thickness of the blades, because, in the position in which the head was caught by the forceps, this fact was comparatively immaterial. He did not like the screw. Instead of it he would use a strong India-rubber band. The weight of the blades was another objection, because, the heavier the blades the more the head was prevented from rotating forward. With the principle of the instrument he was, however, pleased.

Dr. Hugh Thomson said that the question was, whether the advantages of the instrument outweighed its disadvantages—was so much complication balanced by what was gained? All that the instrument enabled them to do was to draw with a little less force. By bringing the handles well back, and pressing

on the fore part of the forceps with the other hand, they could, to some extent, accomplish all that these forceps could do.

Dr. Bell said that, in the ordinary forceps, there was always the risk of injuring the perineum. In regard to the thickness of the blades, there was generally room to get in the blades by a little manipulation. With regard to the screw, the object of Tarnier was to prevent the hammering of the head by getting a fixed hold of it. In point of detail, the instrument was, no doubt, liable to improvement; but, in principle, Tarnier's forceps was, ideally, the perfection of the instrument.

II. Addison's Disease, and its Relation to Vitiligo and Alopecia Areata.

DR. M'CALL ANDERSON read a paper on this subject, which will

be found at p. 14.

Dr. Gairdner said that, having seen the case exhibited, he could bear testimony to the accuracy of the description of it given by Dr. Anderson, and to its really being a case of Addison's disease. With regard to the other case referred to, he had also seen it. It was a case of Addison's disease, the characteristic appearances of which were shown in the greater part of the body. The leucoderma was limited to certain parts, such as the extremities, and the scrotum. It was, in fact, a case of Addison's disease, with the peculiarity of leucoderma of the extremities. He recollected that Dr. Greenhow had described one case in his book, and mentioned that he had seen another. These were the only cases, in the vast collection he had made, in which this peculiarity had occurred. In Addison's original monograph, however, if he was not mistaken in his recollection, there was figured one case which was, probably, of the same kind. But Dr. Wilkes, he thought, had disowned that case altogether, and thought that Addison was mistaken in the diagnosis of his own disease! The association of vitiligo with Addison's disease was certainly very rare; and he would not venture to submit any theory upon the subject.

Dr. Foulis described the post-mortem appearances of the case which died (see Dr. Anderson's paper). He stated, in addition, that, since that case, he had examined the suprarenal capsules in all his post-mortem examinations. He found that disease of the capsules was not very infrequent; partial disease was, indeed, very common. In no other case, however, had he found Addison's disease. Disease of the capsules might, therefore, be present without Addison's disease. The converse was

also true—viz., that Addison's disease might exist without any disease of the capsules. This was explained by the nerves of the solar plexus and semilunar ganglia being diseased. Scrofulous degeneration of the suprarenal capsules was, however,

the lesion at the base of Addison's disease.

Dr. Perry said that the patient referred to by Dr. Anderson was also under his care, and he had not any doubt of its having been a case of Addison's disease. The youth of the patient exhibited was an exceptional circumstance, most of the cases seen having been further advanced in life. With regard to the conjunction of Addison's disease with vitiligo, he had no less than five cases under his care at the same time during last session. None of them improved under treatment.

Dr. Renton admitted that when he first saw, in the hospital, the boy exhibited, he anticipated that the post-mortem examination would be interesting. The alternative of recovery did not occur to him. In regard to treatment, the question had occurred to him—seeing ordinary treatment was so ineffective—why not remove the capsules? Dr. Brown-Sequard had removed both capsules from a rabbit, with a result quickly fatal; but in another case the animal survived three days, only one capsule being removed. On talking over the matter with Professor Cleland, the latter thought that, if very carefully performed, the operation of removal might be accomplished, and the animal survive.

Mr. John Reid said that these appearances of leucoderma were not at all uncommon, and he attached very little importance to them. They might disappear without any treatment

at all.

Dr. Johnston Mucfie said that the fact that the disease could exist without any lesion in the suprarenal capsules, appeared to negative the value of any surgical interference,

such as that suggested by Dr. Renton.

Mr. William J. Fleming said that it was noteworthy that though innumerable experiments of all kinds had been made on the sympathetic nerve by physiologists, not one of these interferences had been productive of the phenomena seen in Addison's disease.

Dr. Joseph Couts said that, having examined three or four capsules from Addison's disease, he could confirm the general accuracy of Dr. Foulis' description of the pathological appearances. His impression was that the disease of the suprarenal capsules was a truly tubercular one. He had, in more than one of the cases, detected miliary tubercles in the midst of the masses of round cells described by Dr. Foulis; these tubercles

consisting of rounded collections of cells, with a giant cell in the centre of each. It was possible that in some cases there might be no tubercles detected, because degeneration might already have so far overtaken them as to obscure everything.

After a few words from Dr. Glaister, in regard to a case he had seen in the Royal Infirmary, Dr. Charteris said that that case was under his charge. The man was a miner, having been in failing health for some years. Though it was the first case he had seen, he had no doubt of the diagnosis. The greasy velvety condition of the skin was very marked in that case. When he left to go to the Convalescent Home at Lenzie, the tint of his skin was getting deeper every day. He greatly questioned whether Dr. Anderson's anti-strumous treatment by cod liver oil and counter-irritants, would have had any effect in that case.

Dr. Hugh Thomson said that alopecia areata was connected with an anemic condition of the blood, and the treatment most successful was to improve the general health; iron being especially serviceable. Vitiligo was also connected with a certain anemic condition of the blood. It would be difficult to say, however, that these diseases had a similar nervous origin. If alopecia areata had such an origin, it was singular that it should be confined to the scalp. Vitiligo was an obscure disease, and might well be supposed to have some

nervous origin akin to Addison's disease.

Dr. Anderson, in reply, said that, as regards age, it was the active period of adult life which was most liable to Addison's He regretted to hear Dr. Charteris' remark about the probable non-amenity to treatment of the case he had had charge of. A conviction of that kind was almost certain to result in treatment not being sufficiently carried out. Coats' remarks in regard to having found, in Addison's disease, tubercles in the capsules, corroborates his (Dr. Anderson's) statement as to the scrofulous nature of the disease. Dr. Renton's suggestion in regard to operative interference would be little likely to be of service, if the opinion is correct that the semilunar ganglia and solar plexus are involved in Addison's disease. In regard to Dr. Perry's cases, his opinion was that there must be some mistake somewhere. Addison's disease was a rare affection; Vitiligo was also not a common disease; but the concurrence of both affections in the same case was so very rare that he could hardly conceive of one physician having no less than five of such cases under his charge at one and the same time.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Session 1878–79. MEETING II.—Nov. 12th, 1878.

Dr. Alex. Robertson, President, in the Chair.

Dr. H. C. Cameron showed an Exostosis which he had removed from the terminal phalanx of a girl, aged 15 years. As is usual in such cases, it grew under the nail, and the treatment consisted in removing part of the nail and dissecting the soft parts, so as to expose the exostosis, which was then cut off with the bone forceps.

DR. CAMERON also showed a large OSTEO-SARCOMA, occupying nearly the whole length of the fibula, for which he had ampu-

tated the leg above the knee.

DR. MACEWEN showed a man whom he had TREATED FOR ŒDEMA GLOTTIDIS BY THE INTRODUCTION OF A TUBE INTO THE TRACHEA THROUGH THE MOUTH. The patient, in trying to swallow a hot piece of potato, had allowed it to stick in the back part of the mouth, where it lay for some time. It scalded the parts before it could be removed. He was admitted at one o'clock next morning to the Royal Infirmary, suffering from cedema glottidis. It was found that a considerable portion of the mucous membrane of the fauces had been removed, and the parts had a hard, thickened feeling, and an appearance as if they had been burned. He was sent into the infirmary by Dr. M'Millan, of Paisley Road, who stated that this was an urgent case, requiring operative interference. It was such a case as would have required opening the windpipe, had the idea of the tracheal catheter not presented itself. Dr. Macewen having previously resolved to try the tracheal catheter in such cases, it was accordingly put in practice. A No. 12 gum elastic catheter was, in the first place, passed through the glottis, and afterwards a rectal tube, with the end cut off and the edges pared. The passage of the tube caused some excitement on the part of the patient, who drew several deep inspirations, and coughed for about two minutes. Patient held the tube in with his own hand for half an hour, when he drew it out in order to cough, as he said; Dr. Macewen at once cleansed the tube and reintroduced it. It was kept in for twelve hours, cleaned and replaced, and at the end of thirty-six hours, in all,

it was finally removed. Patient appeared to get used to the tube, and, at the end of the period mentioned, he slept for four or five hours. The cedema was found to be so far reduced as not to require a longer use of the tube, and the patient made an uninterrupted recovery. Dr. Macewen had previously used the tracheal tube during an operation for the removal of epithelioma from the pharynx and back of the tongue. In this operation he adopted the line of incision, previously used by Dr. Foulis, as described by him in the British Medical Journal for Oct. 12th, 1878, but, instead of first performing laryngotomy, as Dr. Foulis did, he introduced a tracheal tube, covering the interval between the sides of larynx and the tube with a sponge, so as to prevent any blood getting into trachea during the operation. The patient got chloroform through this tube, and, at the end of the operation, when he regained consciousness, the tube was removed. For this purpose it acted excellently. He had been told, and also saw from the literature of the subject, that tracheal tubes had previously been used in France, but as far as he could at present learn, these tubes were not passed down through the vocal cords, as he proposed and practised in those cases. He was certain that Chaussier's tube was one which entered a little way into the glottis, and was for the purpose of insufflation, and not a respiratory catheter. Trousseau had declared against their use in cases of croup, as was proposed by Bouchut, but he had not been able at that time to see the original paper by Trousseau on this Dr. Macewen also mentioned that he saw from Malgaigne's Operative Surgery, which had just been handed to him, that Desault's proposal evidently conveyed the idea that the tubes were to pass the vocal cords.

It was curious to note that while the tube was in the glottis the patient could drink, and could say "yes" and "no" quite distinctly. Dr. Macewen had put a tube into his own glottis, and found that he could breathe through it, though it was by no means a delectable sensation. With regard to the uses of the method, he did not know whether it could be applied in the case of young children, who might not have strength to expel mucus through the narrow tube which would be required for them, but adults had no difficulty in expelling pellets of mucus through the tube, with a sound like that of a cough. The advantages of the tracheal catheter were, that in the country, for example, a tube could be passed easily into the trachea from the mouth in cases where, from objections of the friends or want of assistance, tracheotomy could not be performed; or, it might be passed as a temporary measure pending

arrangements for tracheotomy. Again, the moist, warm, interior of the tube would catch dust which might find its way into the trachea by the ordinary tracheotomy tube, and also, as it was kept at the temperature of the body, it would heat the air on its way to the lungs. Dr. Macewen thought, also, that death from chloroform sometimes resulted from the falling back of the tongue over the larynx, and the introduction of the tube would avert that danger. Considerable salivation was set up by the tube in the mouth, but this ceased in a few hours. Of course, such a tube must not be left in long, cases in which a tube would be probably required for a week or

more would be better subjected to tracheotomy.

Dr. Foulis said that he had paid some attention to laryngeal diseases, and he was aware that the catheterism of the larynx and trachea, as it is termed by Malgaigne, was an easy operation. It was in use by Schroetter of Vienna, and others, for the relief of chronic tracheal strictures. But, with regard to the propriety of pushing a metal tube into an acutely inflamed larynx, and leaving it there for thirty-six hours, he was at variance with Dr. Macewen. The case seemed to be analogous to that of an acutely inflamed urethra, where a surgeon would hesitate before leaving in a full-sized bongie for thirty-six hours. As to the case of cedema laryngis related by Dr. Macewen, it seemed to him that scarification of the cedematous parts of the mucous membrane would have been at once easy and effectual, and that the use of the tube through the glottis a place which was not affected in cedema laryngis-was not necessary. He alluded to a case, in illustration of the rapid and spontaneous relief of cedema laryngis, as further showing how a tube might be used in a superfluous manner. referred to the directions for catheterism of the larynx after Desault and Chaussier, given by Malgaigne in his Operative Surgery (translated by Brittan in 1846), and said that the method had evidently been in use by French surgeons in that day, and for some reason had been abandoned. Again, in cases of urgent dysphora and acute inflammation of the larynx not amenable to scarification, he thought that a small opening ought rather to be made in the crico-thyroid membrane, through which a tube could be passed and left in for a longer or shorter time. This was an extremely easy operation and very satisfactory; several cases in which he had performed it had healed quickly and with good results; and it afforded that perfect rest to the acutely inflamed larynx which could scarcely be possible with a large tube distending it.

Dr. H. C. Cameron said he quite agreed with Dr. Foulis in

preferring the operation through the crico-thyroid membrane in these acute cases, and he gave details of a case in which he had performed that operation with instant relief; and of another case in which a prolonged spasm had followed interference with the vocal cords. He thought spasm a not unlikely sequence of the proposed catheterism, adducing in evidence of this a case of a child who had introduced a bean into the trachea, and died of spasm of the glottis, the bean not being large enough to cause anything like total obstruction of the trachea.

Dr. Macewen, in reply, said, that his opinion had not been changed by the observations of previous speakers. In the case of the urethra, though it was not advisable to introduce catheters during inflammatory stages, where it was at all possible to avoid doing so, yet, in certain cases it was imperative to introduce an instrument to relieve the bladder, and by leaving this instrument in good results followed; the inflammation not increasing but diminishing. Regarding spasm of the vocal cords, mentioned by Dr. Cameron, as likely to occur, he pointed out that the case mentioned by that gentleman was one in which a small body produced irritation, and was the cause of the supposed spasm; the tracheal tube being introduced beyond the vocal cords, and retained there, he would not fear spasm as a result of withdrawal, but rather paralysis, if anything, more especially if the instrument were retained in situ too long; and, on the other hand, as long as the instrument remained in situ it was a physical impossibility for the spasm to come on.

Dr. D. Fraser showed a case of Writer's Cramp. He said: —I was consulted a few weeks ago by James Paton, aged 22, formerly a clerk, now a commercial traveller. symptoms of the disease were observed about September, 1876. For two or three years before that time he had been working in his leisure hours at shorthand, at which he had become expert enough to be able to write 100 words per minute. It was while practising shorthand that he first felt a difficulty in writing. He found out that, contrary to the usual rule, he could think out the phonetic characters faster than he could write them. At the beginning of the year 1876, he was put in charge of the office in which he was employed, and this entailed a great deal of anxiety, though less writing than formerly. His writing difficulties became so pronounced in 1877 that he had to give up writing with his right hand, and acquire the ability to write with his left. Before doing this he had tried all kinds of dodges in the way of holding his pen.

I should have said that his difficulty was the spasmodic contraction of the right index finger. Whenever the pen touched the paper, the point was driven into it by this contraction, while the penholder was pressed down upon the side of the thumb with every stroke. He had, amongst other plans, tried the effect of folding the index finger upon the palm of the hand, while he held the pen between the thumb and second finger. This mode of writing was soon given up on account of a sore forming on the side of the index finger which, though not engaged in holding the pen, still contracted spasmodically. He can hold a pen in the usual way perfectly well, so long as he does not attempt to write. Thus, in adding up a column of figures with the pen held in the usual way and used as a pointer, he has no difficulty until he touches the The only other action besides writing that he has any difficulty with, is that of holding a spoon in taking fluids, when he has to support the index with the second finger. has been practising since June, 1878, at the pianoforte, and he informs me that he has no difficulty in manipulating the keys with his right hand, or with the index finger of that hand.

His general health is, and has always been, very good, and he has never suffered from any other nervous troubles. His family history is also very good. There is no paralysis affecting the muscles of the hand, and these, as well as those of the forefinger, act normally in almost everything but writing. On further inquiry I learned that three months before the beginning of the disease he sprained his right thumb, which remained more or less swollen and painful for ten or twelve days, and during this time he was daily doing his work as a clerk. This fact has raised in my mind the question if this case be not of the nature of an hysterial contraction, somewhat similar to those interesting cases referred to by Professor Charcot, where muscular contractions of a persistent character

were induced by slight traumatic lesions.

He has hitherto had no very systematic treatment. Faradisation of the extensors of the index finger was tried, but soon given up. He is now, after twenty months' rest, as bad

as when he first gave up writing.

Encouraged by the success of Dr. Poore in the treatment of such cases, I began the application of the continuous current to the nerves of the arm, with mild faradisation to the muscles of the hand, more particularly to the interessei muscles of the forefinger.

Mr. Clark thought the interessei muscles were here at fault, and several members recommended entire rest on a splint, or

by section of the muscles or nerve affected, but *Dr. Fraser*, in reply, quoted the case of Dr. Buzzard, in which these measures had been insufficient.

DR. GEORGE BUCHANAN showed a girl in whom LANGEN-BECK'S OPERATION FOR CLEFT PALATE had been performed. The cleft began in the middle line of the uvula, and extended to the margin of the hard palate, where it went forwards on the left of the middle line, and terminated at the second left This was a very unusual peculiarity. incisor tooth. vomer was completely attached to the crest of the palate, and bounded the right side of the cleft. The operation began by raising the edges of the cleft, then an incision was made along the line of the gum on each side, and the tissues of the palate raised from the bone, after which the tendon of the tensor palati on each side was divided as it curves round the hamular process. Dr. Buchanan said he preferred this to the operation of Ferguson, who divided the levator palati muscle with a curved knife, and he said the effect of the division of the tendon of the tensor was as marked as that of tendons for talipes. This done, the edges came together easily, and perfect union resulted, except at the very end of the cleft in front, where a minute hole was left. This he proposed to close along with a badly united hare-lip which had been operated on in childhood. The result of the operation, so far, was remarkably good, the palate was quite flat, and the pronunciation of all the letters of the alphabet, even of the sibilants, was nearly perfect. Dr. Buchanan said that in similar cases he had seen formation of bone occur in the transplanted palate, and had no doubt that it would be so here also.

Dr. Robertson showed a case illustrating Cerebral LOCALIZATION AND CRANIAL PERCUSSION. Dr. Robertson first referred to a patient whom he had shown to the Society last Session, and whose case was similar to the one he was about to submit. That patient, he said, had laboured under Jacksonian epilepsy of the arm and leg for seven years. Although he had not previously felt pain in any part of the head, yet when the skull was percussed by tapping it firmly with the point of the finger, he complained of pain in a well defined area over the motor region of the left side. No pain was felt by mere pressure over the part, and Dr. Robertson considered that in percussion the force applied was transmitted to the seat of disease on the surface of the brain, irritating it and giving rise to pain. The patient shown to the meeting was a boy, aged 13, who in June, 1876, in a fight with some other boys, was struck by a piece of brick on the left side of the head. The exact

site of the injury was 4 inches above the highest part of the ear, 13 inches to the left of the middle line, and 3 inch in front of the parietal eminence. Though stunned at the time, he was able to resume his employment next day, but about six weeks afterwards he began to suffer from epileptic fits. These at first were in the form of petit mal, without convulsive movement, but this set in after about two months, his head turning to the right during each seizure. In October following he had two severe complete fits. He was then subjected to treatment, consisting of the bromide of potassium, the biniodide of mercury, and cantharides blisters over the injured part. Under this treatment the fits rapidly ceased, and he felt quite well. He continued well from that time, remaining entirely free from epilepsy for twenty-one months; but on the 1st of this month he had another seizure. This appeared to have been due to bad hygienic conditions (which were explained), and to excitement. For about six weeks before the fit he had been occasionally subject to headache in forehead and left temple. Consciousness had been fully preserved during the first stage of the seizure, which had set in by the head turning to the right, and afterwards by the right arm turning round. No pain had been felt by the patient at the seat of injury, even when it was pressed on, but Dr. Robertson had found that this was the only part which was painful on percussion.

Dr. Robertson then proceeded to percuss the patient's head before the meeting. On being questioned, the boy said that the tapping was not more disagreeable at one part than another, but on the percussion being repeated, he said that at one point on the left side it was distinctly painful; this being

the place where he had been struck by the brick.*

In speaking of the case, Dr. Robertson said it would be observed that the convulsive movements began on the side opposite the injury, which had been inflicted over the motor region of the brain, and that no pain is felt there by the

patient, unless it is percussed.

Dr. Finlayson said he had seen the previous cases, and the effects of tapping were very marked. Dr. George Buchanan said he was sceptical as to localisation at all, seeing that parts of the brain might be lost without any difference in the nervous faculties resulting. He thought the convulsions and movements produced by tapping the surface of the skull in such cases as this, were to be explained as reflex, from irrita-

^{*}Dr. Robertson writes that on the day following the meeting, the boy's father said that his son wished to explain that on the first tapping, the part where the stone had struck him had been missed.

tion of filaments of the fifth nerve, and he referred to the case of a boy who, after an injury to the left side of the scalp and skull, was subject to epileptiform fits; in that case he divided the supra-orbital nerve, and the patient remained free from the fits. As to tapping the round and vaulted walls of the skull, he did not see how we could expect to detect local differences in that way, as the force of the blow would be diffused, and would rather affect the opposite point to that struck. Dr. Maceiven referred to cases of fracture of the skull, and held that, in many instances, relief could be got by operating over the seat of past injury for the relief of abscess

or depressed bone.

Dr. Robertson, in reply, said that convulsions from irritation of the fifth nerve, whether the irritation were outside the skull or in the dura mater, were reflex, and usually began on the same side as the irritation, whereas those due to disease in the motor region of the surface of the brain were direct, and began in the opposite side of the body. Further, the latter were more apt at the commencement to be limited to one or two muscles, such as those of the neck or hand. With respect to the statement that large portions of the brain in the motor region had been removed without motor or mental injury being sustained by the patient, he considered that the more complex muscular combinations for some of the finer movements would be damaged in such a case, even though there might not be ordinary hemiplegia, like what is seen in destruction of the corpus striatum. In regard to percussion of the skull, he held that the force applied did pass deeply in the line of its application, and referred particularly to the recent experiments and observations of M. Duret, in support of his statement. In reference to the case spoken of by Dr. Foulis, where there was loss of Broca's convolution without aphasia. Dr. Robertson remarked that it would be desirable to have a fuller account of it, and he would like to know if the patient were right or left handed.

MEDICAL ITEMS.

UNDER THE DIRECTION OF

ALEX. NAPIER, M.D.

Dangerous Prescriptions.—Mr. Charles Rice gives, in New Remedies, a list of most of the substances which have

been found to produce explosive mixtures. He states that potassium chlorate, and all other chlorates, should never be prescribed in powder mixed with organic or inorganic combustible or oxidizable bodies. If they are to be used in powder they should be made up alone, or if desired in combination they should be ordered in solution. The following, for instance, have proved dangerous, and have caused serious accidents:—

Potass. Chloratis, Pulv. Gallæ or Acid. Tannici.

Ft. pulv. to be made into a gargle.—The powders should be dispensed separately, or the gargle at once made. [This is a very popular prescription; we know it to be in every day use, yet we have never heard of any explosion of the dry ingredients having occurred.]

Potass. Chloratis, Pulv. Catechu.

To be used as a dentifrice. This ought never to be dispensed.

Potass. Chloratis, Sodii (or Calcii) Hypophosphit, Aquæ.

The two salts must not be rubbed together, or an explosion will result, they should be dissolved separately in water, and mixed.

Potass Chloratis, Glycerinæ, Acid. Tannici, Aquæ.

The powders and the glycerine must not be rubbed together; the tannic acid should be dissolved in the glycerine, and the pot. chlor. in the water, and the two solutions mixed.

Potass. Chlorat., 3ss. - 3i. Tr. Ferri Perchlor., 3ss. - 3ii. Glycerine, 3ss. - 3iii.

Liable to produce an explosive mixture, especially when warmed. [Several authentic cases of explosion of this mixture are recorded in the current volume of New Remedies. They are explained by the supposition that the tineture of iron, having contained an excess of hydrochloric and nitric acids, acted upon the potassium chlorate, producing the substance which Davy named Euochlorine, but which is now regarded as a compound containing chiefly chlorous and chloric acids, and which explodes when heated to 70° C.]

Potassium Permanganate should never be brought into contact with any readily oxidizable and combustible substance. One of the most common mistakes is to bring it together with

glycerine; as, for instance:-

This readily produces an explosion. The same salt, with alcohol and distilled water, almost always explodes in a closely stopped bottle. When mixed with reduced iron also, it takes fire; this may be prevented by adding a small quantity of tale.

Oil of turpentine, and other volatile hydrocarbons, ignite and explode violently in presence of certain powerful re-agents, such as sulphuric and nitric acids.

Iodi., 5ss. Linim. Camph. Co., Linim. Saponis, āā jii.
M. Ft. linimentum pectori infricandum.

This liniment is said to have exploded, owing to the formation of nitrogen iodide, there being a good deal of ammonia in the Lin. Camph. Co.

Argenti Oxid., gr. xlviii. Morph. Muriat., gr. i. Ext. Gentianæ g. s.

Make twenty-four pills and silver them.

The above prescription was furnished to a lady in Notting Hill, who put the box in her bosom, where it exploded three quarters of an hour afterwards, severely injuring her and setting fire to her dress.

Acidi Nitrici, Acidi Muriatici, Tinct. Nucis Vom., āā zii. Prescribed by a New York physician; exploded after about two hours.

Acidi Nitromuriat, zi. Tinct. Cardamomi, zss. Exploded and did serious injury.

Potassii Sulphidi, 5ii. Aquæ Rosæ, 5iii. Solve et adde Tinct. Benzoini, 5iii.

This preparation, after standing for some time, burst the bottle.

Caution with regard to Calomel.—Mialhe and Laroque have shown that calomel may, when acted on by the alkaline chlorides present in the system, be transformed into bichloride of mercury. Polk has also pointed out the fact that a species of poisoning may follow the taking of a mixture (prepared some time before and allowed to stand) of calomel and sugar, or calomel and magnesia. M. Jolly, having submitted these questions to a searching investigation, has arrived at the following conclusions:—Alkalies and their carbonates, and the earthy bases, change calomel, with greater or less rapidity, into corrosive sublimate; well refined white sugar has no influence

on it, but as raw colonial sugar is sometimes acid, and beet-root sugar often alkaline (from the presence of a little hydrated lime), the phenomena of poisoning, observed by Polk, are most probably due to the action of these impurities in the sugar on the calomel. The practical conclusion is, that in ordering calomel for internal use, it must not be combined with acids (or jams and other preserves containing acids), alkalies, chlorides, or raw impure sugar.—(Gaz. Méd. de Paris). Lyon Médical, 24th November, 1878.

Intra-Venous Injection of Milk, as a Substitute for Transfusion of Blood.—Having observed that transfusion is comparatively rarely resorted to, chiefly on account of the inherent difficulties and dangers connected with the operation, almost all of which, however, arise from the tendency to coagulation of the fluid which is employed, and in view also of the fact that milk, while chemically inferior to blood itself, is more allied to chyle (the material of which Nature makes blood) than any other fluid with which we are acquainted, Professor J. Gaillard Thomas was led to substitute milk for blood in transfusion, the idea being suggested by the recollection of some cases in which it was used in 1850, by Dr. E. M. Hodder, of Toronto. Dr. Hodder injected milk into the veins of three patients moribund from Asiatic cholera, with the result that two of the patients recovered. Professor Thomas bases his favourable opinion of the proceeding on experience, the operation having been performed seven times by him, three times by Hodder, and twice by Dr. Howe-in all twelve times. In one instance only did evil effects manifest themselves-in one of Howe's cases; but this case should not be taken into consideration, as decomposed milk was employed, which, like decomposed blood in transfusion, would almost surely produce fatal consequences. Professor Thomas sums up the matter in the following propositions:—

"1.—The injection of milk into the circulation in place of blood is a perfectly feasible, safe, and legitimate procedure.

"2.—Only milk removed from a healthy cow, within a few minutes of the injection, should be employed. Decomposed milk is poisonous, and should no more be used than decomposed blood.

"3.—A glass funnel, with a rubber tube attached to it, ending in a very small cannula, is better, safer, and more attainable, than a complicated apparatus, which is apt, in spite of all precautions, to admit air to the circulation.

"4.—The intra-venous injection is infinitely easier than the

transfusion of blood.

"5.—The injection of milk, like that of blood, is commonly followed by a chill, and marked and rapid rise of temperature, then all subsides, and great improvement shows itself in the

patient's condition.

"6.—I would not limit lacteal injections to cases prostrated by hemorrhage, but would employ it in disorders which greatly depreciate the blood, as Asiatic cholera, pernicious anæmia, typhoid fever, &c., and as a substitute for diseased blood in certain affections which immediately call for the free use of the lancet, such as puerperal convulsions, &c.

"7.—Not more than eight ounces of milk should be injected at one operation."—New York Medical Journal, May, 1878.

Therapeutic Effects of Digitalis in Heart Disease.—In the Gazette des Hôpitaux, Nov. 9, 1878, we have a summary of Prof. Teissier's (Lyons) views on this subject. They were communicated to the Association Français pour l'avancement des Sciences, and are founded on long and careful observation.

In mitral disease, whether with obstruction or regurgitation, or both, digitalis is of great service, especially if there be a small irregular pulse, marked palpitation, dyspnæa, or any tendency to dropsy. In lesions of the aortic valves, digitalis may be employed with advantage. Without entering into the various theories which have led some to oppose altogether its use in such cases, M. Teissier has repeatedly found that aortic insufficiency, with severe palpitation and oppression, and even pulmonary apoplexy, was benefitted by digitalis. Cases also of a ortic contraction, with very considerable tension of pulse and hypertrophy of left ventricle, have done well with small doses continued for some time. Still, M. Teissier readily admits that, where the contraction is very marked, with feeble pulse and a tendency to syncope, this treatment is very doubtful, and if used at all it must be with the greatest caution.

Lesions of right heart.—In a case of hypertrophy with dilatation of the right side of the heart, or tricuspid insufficiency, or if there is contraction of the pulmonary orifice, digitalis is strongly indicated. The oppression, the tendency to edema, and the cyanosis, are notably diminished, especially if the digitalis is combined with purgatives, such as jalap or scammony.

In short, according to M. Teissier, there are no affections of

the heart in which digitalis is expressly contra-indicated. Its action is beneficial, not only in lesions of the mitral orifice, but also of the aortic or pulmonary valves, and in hypertrophy with or without dilatation. It only appears to him contra-indicated where there is extreme weakness of the pulse, where it is not well borne by the stomach, or in the last stage of exhaustion. [A similar, but fuller summary, is to be found in Ringer's Therapeutics].

J. W. A.

Glycerine of Creasote in Ulceration of the Cervix Uteri.—Having heard of this preparation being employed in cases of ulceration of the larynx, Dr. Maurice Mendelssohn (Blidah, Algeria), tried it for ulceration of the cervix uteri, after having been disappointed with several of the ordinary applications. The following is the formula:—

Pure Creasote, 2 parts. Glycerine, 50 parts. Alcohol, 25 parts.

This he used locally in thirty-seven cases, with very good results. Daily, or every second day, it was applied to the ulcerated surface with a camel hair brush. Out of twenty-eight cases of simple ulceration or erosion, twenty-six were cured and two improved; average number of days under treatment, twelve. In seven cases of fungoid ulceration, or granular inflammation, six were cured and one improved; average number of days under treatment, seven. Two cases of syphilitic ulceration were so treated for fully a month without benefit, when he "had recourse to iodoform, which has always done good service in such cases." [The powder may be applied, or an ointment 5i.—3i.]—Gazette des Hôpitaux, 12th Oct., 1878.—J. W. A.

Pyrogallic Acid in Internal Hæmorrhages.—Dr. A. Vesey claims for pyrogallic acid extraordinary powers as a hæmostatic. In two cases of hæmoptysis (from phthisis), treated by one grain doses of the acid every hour, the bleeding was promptly arrested. In the case of a lady who, inheriting the hæmorrhagic diathesis, suffered from very copious menorrhagia, one grain doses of pyrogallic acid, with m40 of extr. ergot liq., given every second, third, or fourth hour as necessary during the flow, had the effect of notably diminishing the flux, and bringing it within normal limits. In another case very profuse hæmatemesis, treated by similar doses of the remedy at short intervals, a small dose of morphia being subsequently administered, was stayed within three

hours. Dr. Vesey sums up the advantages of pyrogallic acid in the following words:-"The dose is small; it does not derange the stomach in the way that the usual gallic or tannic acid mixtures do; it does not cause vomiting, as iron and ergot mixtures sometimes do; it is easily taken, and has no disagreeable after-taste. It appears to be more rapid and certain than any of the remedies mentioned above, and far surpasses the time honoured acid infusion of roses, or pil. plumbi cum opio. It dissolves readily in water or in spirit. A spirit solution of definite strength affords a convenient and ready method of administration. There is no reason why it should not also be used in the form of spray in hæmoptysis. but I have had no experience of its use in this way. A combination of ergot and pyrogallic acid will afford a very powerful means of arresting internal hemorrhages."—Dublin Journal of Med. Sc., Dec., 1878.

[Shortly after reading the article from which the above note is taken, an opportunity presented itself of trying pyrogallic acid for profuse bleeding per rectum, in a case of advanced phthisis. Turpentine internally, and ergotin (5 grain doses) hypodermically, had failed to check the discharge; this object was speedily accomplished, however, by the administration, every three hours, of one grain doses of the acid, with m30 of liquid extract of ergot, and m10 of liquid extract of ergot, and m10 of liquid extract.

—A. N.]

A New Method of Permanently Removing Superfluous Hairs.—Dr. L. D. Bulkley having found the means usually recommended for the removal of hairs (depilatories, epilation, &c.) barren of permanent results, has resorted to another method devised two years ago. His aim is to reach down into the follicle, after extracting the hair, and to thoroughly break up its bottom and sides, thereby exciting an inflammation which seals it from its base to its orifice. This is accomplished with a small, three-sided, straight, surgical needle, firmly inserted at its blunt extremity in a convenient handle. Each follicle must be operated on singly. The hair is seized with epilating forceps, and the point of the needle engaged in the orifice by the side of the hair before the latter is taken out. Gentle traction is then made upon the hair, and at the same time slight pressure on the needle, and as the former slips out, the latter readily enters the follicle for a little distance. needle is then thrust farther in, to a somewhat greater depth than that occupied by the hair, and is turned or twisted by

rotating the handle between the thumb and forefinger; when withdrawn its sharp edges are seen to be filled with epithelial débris scraped from the sides of the follicle. Occasionally, blood will follow immediately, but this generally gives no trouble. The operation is not very painful, and ladies readily submit to it. No appreciable scar is left. Patience is required in carrying out the measure, as it is difficult to treat more than 25-40 hairs at a single sitting. Dr. Bulkley calculates that rather less than half of the hairs removed at an operation will be permanently extirpated. The permanency of the results has been most satisfactorily demonstrated on several patients: in the lady on whom the operation was first performed, two years ago, the hairs remain absent; and in a second case, hairs removed a year ago have not returned.—Archives of Dermatology, Oct. 1878.

Another Method of Treating Hirsuties.-On the suggestion of Dr. Michel, an ophthalmologist, of St. Louis, who had for some time successfully employed electrolysis for the removal of "wild hairs" from the evelids, Dr. Hardaway was induced to make use of the same method in dermatological practice. Dr. H. describes the proceeding thus:-"The patient should be seated in a reclining chair, and facing a good light. The needle-holder is then attached to the negative pole of the battery, and an ordinary electrode, covered with a moistened sponge, is connected with the positive pole. Under a lens of about two inches focus, the needle is inserted the requisite depth into the follicle; the circuit is then completed by the patient pressing the sponge electrode (anode) against the palm of the hand. The electrolytic action is allowed to go on until a white froth is seen to well up around the insertion of the needle, when the current is at once interrupted by the patient releasing the positive electrode, after which the needle is withdrawn. Occasionally the hair comes away adhering to the needle, but generally it is necessary to remove it with a pair of epilation forceps. No force, however, should be used in the extraction, for if the hair does not come away readily, it is an evidence that the operation has failed, and it should then be repeated. The smaller the battery the longer will be the time consumed; but if a large battery be employed the pain will be proportionately increased. With a good battery of eight elements the desired result can be accomplished in from two to five seconds, and with a trifling amount of pain."-Thidem.

The use of Ipecacuanha in Labour.—Although ipecacuanha has now been in general use for about two centuries, no one has hitherto seemed to claim for it the properties of an oxytoxic. Dr. J. H. Carriger, however, regards it as a potent and reliable uterine motor stimulant; he says that its acknowledged power over uterine hæmorrhage, which is very considerable, is not due to astringency in any sense of the word, nor to its sedative action on the heart and arteries, nor to its equalizing influence upon the circulation, but to an actual power of exciting tonic contraction in the uterus. He supports this opinion by a large number of cases, covering a period of several years, from 1851 onwards. It is peculiarly suitable in cases in which the os is rigid, when the patient is in danger of exhaustion from prolonged and inefficient pains. Dr. C. gives two grains of the powdered root. and finds that it begins to take effect in about half-an-hour, when a second dose has usually to be administered. Morphia is occasionally called for to moderate the uterine action. Dr. C. also considers that ipecacuanha is much safer, both for mother and child, than ergot, as the pains that it induces come at regular intervals, as in natural labour, succeeded by intervals of rest. "In a very large number of cases of rigid and undilated os, when every pain, for hours previously to its administration, had been accompanied by loud outcries, jactitation, and irritability of temper, it has rarely failed in a few minutes to bring quiet and comfort, speedy dilatation of the rigid os, and regularly recurring and forcibly expulsive pains, an entire change in the character of the labour, and a speedy termination."—New York Med. Journal, Nov., 1878.

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Lœwenberg. Paris. 1879.

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GLASGOW MEDICAL JOURNAL.

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ORIGINAL ARTICLES.

A FEW SURGICAL CASES.

BY ALEXANDER PATTERSON, M.D.,

Surgeon and Lecturer on Clinical Surgery in Glasgow Western Infirmary.

V .- TWO CASES OF ADENOID TUMOUR.

(With Photographic Illustrations.)

M. V., domestic, aged 44, came to consult me regarding a growth on the side of her face, which she showed me seven years ago, and which I then wished to remove. She was admitted to the Western Infirmary on the 8th July, 1878.

About twenty-five years ago, a small, hard lump appeared behind the left ear. It grew very slowly for many years, being always painless, nodulated, and movable. As it increased in size, the tumour gradually became displaced towards the front. It is now tri-lobed, lying upon the angle of the jaw, and extending forwards to within an inch and a half of the corner of the mouth. The upper lobe is the hardest and smallest, as well as Its surface is nodulated, and it reaches to the lobule of the ear, which it draws a little forwards. The lower or outer lobe is the largest, and is quite smooth and rounded, and softer than the upper lobe. The inner lobe is also smooth and somewhat soft, and is the most recent, corresponding in position with the glandula socia parotidis. The skin over the mass is very slightly, if at all, altered. There is no implication of the facial nerve, nor any projection into the mouth. I removed the tumour on the 10th, and patient was dismissed on the 24th July.

On the Saturday following the previous patient's dismissal, she called on me, bringing with her J. B., aged 15, a weaver, who carried on her left jaw a growth very similar to the preceding. She was admitted to ward 14 on the 1st August, 1878. Patient has a large, hard, nodulated, and painless tumour over the left parotid. It is quite movable upon the parts beneath, and extends from the meatus of the ear to a point lower than the angle of the jaw, and forwards to within 2 inches of the angle of the mouth. August 3rd.—Removed by a single vertical incision. It was easily shelled out, as the connections with the subjacent parts were very slight. The tumour was firm, nodulated, about the size of a turkey's egg, and of a yellowish-white colour. There is no reason to apprehend a return of the disease in either case. Dismissed on the 13th August.

No skin was removed in either case, a single linear incision having been made in both. In the older patient slight puckering remains, from want of the youthful elasticity of the skin, whilst in the younger one, nothing is visible except

a white thread-like line.

VI.—SPONTANEOUS FRACTURE OF THE FEMUR—AMPUTATION OF HIP-JOINT—DEATH,

A. B., aged 46, male, was admitted to the Western Infirmary

on 28th December, 1878, in a state of collapse.

History.—B. has suffered at intervals from disease in the left lower extremity, for the last thirty-eight years. When he was eight years old, a very slight blow on the thigh led to extensive suppuration; a series of abscesses followed during the ensuing ten years, and when at the age of 18, several small pieces of bone were discharged from openings in the posterior aspect of thigh. During the next decade he was comparatively well. At 28 the thigh bone was again attacked with severe pain, unattended by swelling or redness, which lasted for three months, only ceasing on his removal to the country. Fourteen months ago he received a blow on the left thigh, from the handle of a crane, which kept him confined to bed for a period of two months. The limb swelled around the hip and half way down the thigh; the swelling was poulticed, and opened at an old cicatrix on the back of the thigh. The wound healed, and patient remained well until seven weeks ago, when his present illness began. Pain, at first thought by B. himself to be rheumatic in character, started in the upper part of left thigh; this was soon followed by a swelling, seeing which his medical attendant at once ordered poultices to be applied. On the 22nd December the abscess burst at the former cicatrix on the back of the thigh, giving escape to a large quantity of pus and blood commingled. On the following day, when, assisted by his wife, he was crossing the floor from his bed to the fire, a snap was heard, and patient declared that his leg was broken. He did not fall on the floor,

but, with his wife's assistance, returned to his bed. On examination in the ward, B.'s left femur was found to be fractured in its upper third, the lower end of the shorter fragment being tilted outwards and upwards, as is usual when the break is so high up the limb. Abnormal movement and deformity are readily made out, crepitus not satisfactorily. A circular opening, large enough to admit the finger, surrounded by a hard thickened border, exists on the posterior surface of thigh, about the junction of the middle and superior third. Through this opening there is a constant discharge of thin pus, occasionally bloody in appearance. Patient is very anemic and much emaciated; pulse 120 and weak. He was ordered to have brandy, milk, and beef tea, with tinct. opii. at night, as he had been accustomed to its use for some time prior to his admission. He was slightly delirious for a few days after coming into the house. By the end of the week, January 3rd, he had rallied somewhat; his pulse being stronger and beating steadily at 116, temperature 100. On Tuesday, 7th January, he was in a better state than since admission;

his pulse was 112, and he felt better. Operation.—Intending, if possible, to amputate in the upper third of the thigh, I had the patient placed on the table in the theatre, at 10 a.m. Chloroform having been administered by Dr. Waddell, the limb was elevated, and tightly bandaged from the toes to the middle of the thigh. An Esmarch's band was then wound twice round the top of the thigh, as high up as the perinæum would admit, and a single knot was made in front. Now, one end of the cord was taken behind the opposite hip, while the other was drawn obliquely across the front of the abdomen, and the ends of both knotted together over the crest of the right ilium, and held there by Dr. Wilson. One turn of the band was forcibly raised, and a pad placed over the femoral artery, where crossing the bone. I began the operation with the intention of sawing off the upper fragment below the great trochanter, but on removing the lower fragment and limb it was found that the superior fragment was dead and rotten, close up to the capsular ligament, so that we were compelled to disarticulate the head of the femur from the

acetabulum. There was considerable difficulty in effecting this, as the bone crumbled away from the grip of the lion forceps, and the leverage was gone. Both flaps were made by cutting from without inwards, instead of transfixing, as the position of the fragments interfered with the passage of the knife across the limb. On raising the anterior flap, the femoral artery and vein were seen with empty mouths, and tied, previous to proceeding to the posterior flap. A large number of oozing points were tied in the posterior flap, and on the entire removal of the tourniquet only two minute arteries spouted. The wound was dressed in the usual manner. Dr. Macleod gave us his valued advice and assistance during the operation. Patient never completely rallied; his pulse ranged from 116 to 124, and he gradually sank, and died at 8 a.m. on the 9th January.

Remarks.—About 3 inches of the entire thickness of the shaft of the femur were, to use the most expressive word, rotten, so that removal of the dead bone was out of the question. Even had there been only a comparatively small sequestrum fit to be removed, still there was the compound fracture in the upper third of the thigh, with a large abscess walled with pyogenic membrane, in a man of 46. He must simply have died from exhaustion, as union would not take place. Amputation was the only chance left for life, and the compulsory removal of the head of the bone diminished very considerably the hopes of success. In no other case of hip joint amputation have I witnessed the bleeding so effectually controlled, whether by digital compression or the abdominal

tourniquet. The elastic band did it to perfection.

NUMERICAL ANOMALIES OF THE BREASTS.

BY WILLIAM SNEDDON, M.D., BEITH.

I HAVE thought some of the readers might be interested by giving a short supplementary article to my former paper, on the same subject, which appeared in last year's issue of this Journal.

The notes of the following case are extracted from Edinburgh Medical Journal, vol. 1877, p. 45, reported by Dr. O. H. Garland:—

"Mrs. H., aged 35, was delivered of her third child on 11th March, and on 14th two swellings, about the size of a goose

egg, were seen, one in each axillary space, lying parallel to the edge of the pectoralis major muscle. They were completely isolated, and no anatomical connexion could be traced between them and the mammæ proper. The gland structure could be

made out, but they had no external openings.

"They varied in size, in proportion as the breasts were full or empty. In five weeks all trace of them was lost, except when the child had not been drinking during the night. ings had appeared at her former confinements. The first intimation of being enciente was through the appearance of those tumours, but which remained moderate in size.

"Her only married sister has had similar enlargements at her three confinements. Her mother had none, and knew of none

of her relations who ever had."

The next case of three mammie was reported in the Prov. Med. Surgical Journal, 1852, but that year's issue is not in any of the libraries in Scotland, so I wrote to the author, Dr. Mann, who had the kindness to send me the following notes:—

Mrs. —, age about 24, was confined for the first time. There was a distinct mamma, though rudimentary, with nipple. situated just below the left ordinary mamma. It did not become much enlarged during lactation. Dr. Mann adds that he has lost sight of the individual.

For the notes of the following cases I am indebted to the goodness of the various gentlemen who communicated them to me, and they have not been previously reported in any

Journal.

The notes of the following interesting and unique case were

sent by my friend, Dr. D. N. Knox:-

The patient, a grown man, presented himself at the Western Infirmary, Glasgow, to consult me about a tumour in his groin, which he said had always been there, but which had of late been growing rather larger, and had been giving him both bodily and mental uneasiness. On examination the tumour proved to be an extra mamma, with well formed nipple, situated upon the inside of the right thigh, close below the external inguinal ring. It was about 2 inches long and 11 broad, but was evidently tumefied at the time I saw it, probably from some irritation.

The patient was seen by some of the house surgeons and Dr. A. Patterson. I have never seen or heard of him since.

The next case was sent by the editor of this Journal, Dr.

Joseph Coats:—

I just remember a man in ward 1 of Western Infirmary. whom I was examining for some purpose. I observed an extra

pair of nipples, which I think were about the costal margins, and smaller than the normal pair. The man would be about 40 years of age.

The next case was by Dr. A. Wood Smith. I saw the case about two years ago in the Town's Hospital, Glasgow, but as

it was late at night my examination was a mere glance.

She had a rudimentary breast under each of the regular

ones, with nipples and areola.

Dr. H. C. Cameron wrote me that a fellow-student of his own, who was a personal friend, had an accessory nipple on the left side, about 2 inches under the normal one; and that he saw a little boy in the Royal Infirmary, Glasgow, since the publication of my paper, who had an extra pair of nipples under the normal ones. I sent a copy of my former paper to Dr. Max Bartels, Berlin, who had the goodness to send me a very courteous letter, with some of his publications. He told me the work which I referred to, and which he stated was about to appear, had been in the hands of the printers for some time, but had been unaccountably (to him) detained. He informed me the author was Professor Leichtenstern, of Tübingen, and that the article was to appear in Virchow's Archiv. I then took the liberty of sending my article to Professor Leichtenstern, who had the kindness to send me his in return.

Leichtenstern added my case in an addendum to his work, mentioning the fact that his had been in the hands of the editor in October, 1877, but though mine did not appear till February, 1878, it was read before the Med. Chir. Society, 5th October, 1877, and would have appeared sooner had it not been for an unfortunate accident I met with in the course of practice. My reason for being so particular is that the two articles bear a general resemblance to each other, and the conclusions are pretty much alike. I need not be ashamed to say, however, that Professor Leichtenstern's is much more complete.

The title of his work is "92 Cases from Literature, and 13 Cases of his own, of Supernumerary Breasts and Nipples." * Before proceeding further, I have to thank Prof. L. for pointing out a mistake in the description of my case, and for divining the cause of it. Curiously enough, none of the members of the Med. Chir. Society observed it. I described the case as if the supernumerary breast were on the left side, whereas it was on the right. Those two words, wherever they occur, will require to be transposed. I had it quite correctly

^{*} Virchow's Archiv, vol. lxiii, 1878.

in my notes, but hurriedly glanced at the photograph when

transcribing them, and so committed the error.

Besides the positions of the breasts mentioned in my former article, Prof. L. has collected a case from literature, in which the mamma was situated on the left shoulder, * nearly under the insertion of the deltoid muscle, and a case † of his own, a puerperal primipara, in which a nipple was situated under the left normal mamma, whilst another was in the

deepest part of the axilla on the same side.

I quoted a case of Jussieu's, in which the mamma was said to be situated in the groin, but L. thinks, from his researches, no such case occurs in literature, and that the case referred to was M. Roberts', to which Jussieu applied a general term when he called it a case of inguinal mamma. I am not in a position to controvert this, for I did not see the original Journal in which it appeared, but there can be nothing surer than this that it is a very frequently quoted case. I saw it quoted in Lancet, and Edinburgh Medical Journal.

The case seen by Dr. Knox is an unquestionable one of inguinal mamma, and is all the more interesting from the

doubt about Jussieu's.

The case reported by Pétrequin, and quoted by L., proves the hereditariness of this deformity, at least when once

established, better than any of the cases recorded.

"A man had three mamme, two of which were situated on the left side, the supernumerary being situated immediately under the other. He had three sons who, as well as the father, had an accessory mamma under the normal breast, but on the right side. Two daughters possessed this anomaly on the left side."

Prof. L. agrees with me in saying that supernumerary nipples and breasts occur more frequently than was formerly supposed, and thinks it is present in the proportion of 1 to 500.

As to the relative frequency in the sexes, of the 92 cases collected by him, it occurred in the proportion of 70 females to 22 males; but of his own 13 cases the ratio is 9 of the latter to 4 of the former.

He has been on the outlook for it since 1871, and is inclined to the opinion that it is from want of observation that it has escaped attention, at least in the male sex, and believes it is present as often in the one sex as the other. He thinks were all who have large cliniques, or who examine recruits, to look

^{*} Virchow's Archiv, vol. lxiii, case 102.

[†] Virchow's Archiv, vol. lxiii, case 38 (plate 4, fig. 1). ‡ Gaz. Méd. de Paris, 1837, page 195.

out for it, they would find it as reported by him. One of the most convincing arguments, to my mind, is the fact of this anomaly having been present, in such a relatively large proportion of cases, on the persons of medical students, and who reported it themselves.

The case recorded by Cabrol was the wife of a doctor.

The additional cases in this paper, including two or three others in my last, which are not in Leichtenstern's work, make the grand total of 115 cases, but it must be remembered that this number embraces increase of nipples (polythelia), as well

as increase of mammæ (polymastia).

Leichtenstern thinks accessory breasts and nipples are due to "atavism," or Rückschlag, on our enormously distant, inferiorly organized ancestors with many breasts, and that their more frequent appearance than was hitherto supposed, their rudimentary development, and their regularity of position, all tend to support this argument. He supposes that the departure from the normal polymastia of our ancestors to the bimastia of the historical generations is not to be traced to the natural "Zuchtwahl," but to the non use of the supernumerary breasts, and the non use was perhaps caused by this, that the females of more distant ancestors who brought forth several young ones, were slowly changed into single child bearing ones.

As I remarked in my last paper, the case which I reported is the only one of polymastia in which there was any apparent defect combined, and this is confirmed by Leichtenstern.

I have nothing further to add than this, that I hope this second article may be the means of calling the attention of the profession to this interesting anomaly.

THE USE OF ESMARCH'S BANDAGE IN THE RE-MOVAL OF TUMOURS ARISING FROM ELEPHAN-TIASIS ARABUM.

By WILLIAM M'GREGOR, M.D., &c., Chief Medical Officer, Fiji.

ABOUT the 10th of last July, a native woman presented herself at Levuka Hospital for the removal of a large tumour, that offered all the characteristic appearances of an ordinary elephantiasis growth. The tumour grew from the left labium majus, or, to speak more correctly, consisted of a hypertrophy

of the labium, which was in every respect analogous to the ordinary scrotal tumour, only that it was strictly confined to one side. It was roughly pear-shaped, but presented two or three large protuberances on its surface. At the thickest part, about 3 or 4 inches from the lower end, the diameter was about 12 inches; at the upper end the narrowest part was about 6 inches in diameter. At two or three spots on its surface there were evil smelling, ulcerating sores, about a couple of inches in diameter, and about half an inch deep. The tumour reached downward to the knees; in walking the woman kept it behind her thighs, and in sitting down brought it through to the front. As nearly as could be made out it weighed $21\frac{1}{2}$ lbs.

The woman was about 30; of sound constitution otherwise,

and in good condition for operation.

On the 15th July I procured the assistance of Drs. Cruick-

shank and Corney, and proceeded to remove the tumour.

The patient was laid on a table in the verandah of the building, where a small pulley could be conveniently attached to the roof, as nearly as possible right above the tumour. Strips of adhesive plaster, about 2 inches broad, were then applied over the free extremity of the tumour and extending half way up its length. From the peculiar shape of the tumour it was necessary to do this to prevent the bandage from slipping, and to secure pressure over the broad end of the tumour. The plaster also served as a means of attachment for a strong cord running through the pulley, by which the mass could be conveniently shifted about as required during the operation. At this stage the patient was put under the influence of chloroform. The India-rubber bandage was then applied tightly from below upwards to the neck of the tumour. It was intended to allow the bandage to remain for a minute or two in that position, and then, if possible, to reapply it tighter by leaving an elastic tourniquet on the neck of the tumour, to prevent the reflux of blood. But the pressure of the bandage began to force the serum contained in the tissue of the tumour along the subcutaneous areolar tissue of the labium and mons veneris towards the abdomen, which necessitated the immediate application of the elastic tourniquet to stop it. Accordingly a strong elastic tube, with clasps at the ends, was passed quickly, tightly stretched, three or four times round the neck of the tumour, and the upper part of the bandage immediately unwound. The result of this was that all the serum was forced into the space between the tube and the upper edge of the bandage. In order to lessen the diameter

of the neck of the tumour punctures were freely made into it below the india-rubber tube, to allow the escape of the serum, several pounds of which oozed out in a few minutes, making a very considerable reduction in the size of the tumour, the neck of which could then, after the entire removal of the bandage, be compressed below the tube to about the thickness of a man's arm. Before cutting off the tumour, however, two needles were passed through its neck close to the india-rubber tube on its lower side, to make certain that the tube should not slip on cutting away the mass. The tumour was then cut off by a stroke or two of the knife, and was found to be absolutely bloodless. A great many ligatures were applied to the mouths of open vessels, certainly not fewer than a score, before the tube was slackened. A few bleeding points were secured after the removal of the tube, but altogether the patient did not lose a couple of tablespoonfuls of blood in consequence of the operation.

The patient made a good recovery, the wound healing

quickly, and leaving surprisingly little deformity.

This case was admirably adapted as an experimental one. Opportunities of seeing the effect of the bandage on such a large tumour are not common; and as it was not quite certain that the centre of such a large mass, full of venous sinuses, as these tumours are, would be rendered quite bloodless by the bandage, it, of course, incurred much less risk in the event of any failure to operate on this, a labial tumour, than to attempt to remove a scrotal tumour, where one has to make dissections for the penis and testes. But it is in the latter cases that the bandage will be found of the greatest use, as the operator will be able to make the necessary dissections at leisure without being incommoded by the presence of blood in the wounds.

The amount of blood saved must have been considerable. The iron clamp, used with so much success by my friend and neighbour, Dr. Turner, of Samoa, will, generally, effectively prevent hamorrhage from the pedicle, but the amount of blood contained in these tumours after all attempts to drain them, and which is lost on their removal is, in my experience, by no

means unimportant.

Unfortunately I cannot state definitely the amount of blood saved in this case. The whole tumour, as already stated, weighed 21½ lbs.; after removal it weighed only 10 lbs. losing in weight, through blood and serum, 11½ lbs.; the blood, of course, being restored to the body, the serum escaping through the needle punctures. No arrangements were made for collecting and weighing the serum as it escaped, but a rough

estimate placed it at from 4 to 7 lbs. Future operations of this kind will, doubtless, show greater exactitude in these observations, but there can be no doubt that the proportions of blood, serum, and solid tissue in these tumours varies largely.

In using the bandage for this operation the only special precaution that struck me as necessary was to be careful not to retain the bandage too long applied close up to the neck of the tumour, on account of its forcing the serum out of the tumour into the healthy areolar tissue beyond it. If that occurs, the neck of the tumour is thickened for operation, and the edge of the wound will be left infiltrated, and healing will be delayed for days; but, by the speedy application of an elastic tourniquet, as in the above case, this danger may be obviated; while the size of the neck of the tumour can be greatly reduced by letting out the serum by punctures between the tourniquet and the bandage applied to the lower half or two thirds of the tumour, and by the entire removal of the bandage before ablation of the tumour.

ON ANDERSON'S COLLEGE; ITS FOUNDER AND ITS MEDICAL SCHOOL, BEING THE INTRODUCTORY ADDRESS AT THE COMMENCEMENT OF THE SESSION 1878-79.

By D. C. M'VAIL, M.B., Professor of Physiology in Anderson's College.

AFTER a few words of welcome, the address proceeded as follows:—

The erection of this college was decreed on the 7th May,

1795, in the following deed:—

"I, John Anderson, Professor of Natural Philosophy, in the University of Glasgow, being in soundness and vigour of mind, though reduced in strength of body by sickness, do hereby make my letter will and testament as follows:

make my latter will and testament as follows:-

"Except what is contained in the painted chest with three locks, I give, grant, dispone, and convey the whole of my property, of every sort, to the public, for the good of mankind, and the improvement of science, in an institution to be denominated 'Anderson's University.'"

This John Anderson was a most extraordinary man, and, like many other extraordinary men, has been very much mis-

understood; and the misunderstanding of this great man's work has not been lessened with the lapse of time. How very few people in Glasgow, where, for half a century, he lived and laboured, know anything about him? And even these regard him as having been but a very crotchety old man, distinguished chiefly for his quarrels with his colleagues, and as being the author of a most absurd last will and testament. And the great work that he inaugurated and carried on for 40 years single handed, that work for whose sake he quarrelled with his colleagues, and for the perpetuation of which he founded this college—this very work has been attributed wholly to others—to men who were not born for near a score of years after it was in full operation, in his own natural philosophy class room.

Mr. Anderson was the grandson of a famous Scottish divine —the Rev. John Anderson, minister of the Ramshorn or St. David's church, then known as the north-west church of Glasgow. This grandsire lived in stirring times, having been born in the reign of Charles II, and lived on to the time of the first George. He was a famous scholar, and was tutor to the celebrated John, Duke of Argyle and Greenwich, the Scottish statesman who was the chief agent in bringing about the union of the kingdoms of England and Scotland. In the religious warfare which then raged, Mr. Anderson took an active part. He dearly loved the old Church of Scotland and its simple Presbyterian form of worship, and he spoke and wrote most earnestly and powerfully in its defence. He was the author of a work still to be found in the libraries of divines, entitled Defence of the Church Government, Faith, Works, and Spirit of Presbyterianism. He also wrote, in 1710, a book entitled Dialogue between a Curate and a Countryman concerning the English Service or Common Prayer Book of England. Soon after, a second dialogue followed, and shortly after a third, bearing the title of Carate Calder whipt. He died in 1721, and in the Ramshorn church is a tablet erected to his memory, that speaks of him as "a pious minister, an eloquent preacher, and a brave defender of civil and religious liberty," and says:—" Such a man forget not, while thy country, liberty, and religion are dear to thee.'

In such high esteem had he been held by the Duke of Argyle that his son James, also a licentiate of the Scotch church, was appointed to the living of Roseneath, on the first opportunity, and here, in 1726, the founder of this college was born, and was named John, after his grandfather, who had died five years before. The minister of Roseneath did not

long survive his father. He died when John was 7 years old, and, soon after, the boy went to Stirling to live with his aunt, and be sent to school there. Of his life in Stirling we know little, except that, having inherited the strong Presbyterian and Hanoverian leanings of his grandfather, we find him assisting in the defence of the town against the Highlanders and Prince Charlie, in 1746; and the gun and other accoutrements that he bore as one of the Stirling volunteer guard are still preserved in the museum of this Institution. Soon afterwards we find him a student in the college of Glasgow, and so highly did he distinguish himself that, in 1755, when but 29 years of age, he was by the senate of the university appointed Professor of Oriental Languages. This position he held for two years only, until the death of Dr. Dick, in 1757, when he succeeded to the chair of natural philosophy. Here it was that the great work of his life was to be accomplished, and speedily he set about it—that work was the teaching of science to mechanics—a work that, until then, no man had seriously

attempted.

At the present time every town has a mechanics' institute. Technical education is in every one's mouth. The government of the country have a special department in full swing for the popular diffusion of science, by offering substantial rewards to both teachers and students; and even the old universities have awakened to the necessity of encouraging popular education, and have shown the interest they now take in this by the establishment of local examinations in every town of importance. But in 1757, from one end of the land to the other, there was not any place where a mechanic might acquire a rational knowledge of the underlying scientific principles of the occupation in which he was engaged. Professor Anderson discerned clearly the great want there was of this; he saw that progress in the mechanical arts could only be hoped for when working men ceased to grope in blind ignorance of the fundamental physical laws; and on his appointment to the natural philosophy chair he determined that, so far as he could, he would enlighten the operatives of Glasgow. On Mondays, Wednesdays, Fridays, and Saturdays, he taught the mathematical part of physics, which, of course, could only be understood by those who had already received a good education, and, consequently, was attended chiefly by students taking the usual college curriculum. On Tuesdays and Thursdays he taught the experimental part of physics, which any one of ordinary intelligence could comprehend even without previous training. To this section of the class all were admitted who would come, and in it, to put strangers quite at their ease; no gown was worn. He called it his anti-toga class. This ungowned class was a great offence to Professor Anderson's colleagues, and everything was done to induce him to relinquish it, but without effect, their opposition but fanned his zeal in his new work; for, not content with throwing open his class room doors to all who chose to come, he visited every workshop in the town, spoke to the men individually, and, standing by the bench, explained the rationale of their work, and urged them to acquire further information by attending his lectures. He conceded to them one point more. His portrait in the managers' room shows him to have been exceedingly prim and neat; his elaborately arranged cambric neckerchief and frill, and powdered hair, speak of considerable attention to his toilet; but rather than any artizan student should miss the lecture, it was granted that, if he had not time to go home to dress himself, he might attend in the class room in his working attire.

When a new work is entered into, whose object it is to educate and elevate masses of men, experience in all times has shown that the result, though sure, will come about only after the lapse of many years. Even at the present day, with teaching machinery in vastness and completeness unparalleled in the world's history, the educational status of the country at large rises but slowly. Much less likely was it, in the condition of Glasgow about 1757, that any very striking results would be immediately forthcoming from Mr. Anderson's labours.

Then Glasgow was but a thriving country town, with a population, for city and suburbs, of only 24,000 persons. Old maps show that at this time it had but one long street stretching from the Clyde up to the Archepiscopal Palace, that stood on the site of the present Royal Infirmary. From this thoroughfare a few short streets branched off at right angles. One of these was the Tron Gate, running westwards only as far as the Old Vennel, where it ended at a gateway known as the West Port; the remainder of our present Trongate and Argyle Streets being then a country road, known as the Wester Gate. The wealthier burgesses had their dwellings in the Saltmarket, while the Duke of Montrose and other great county families had mansions in the Drygate, where, at a still earlier date, lived prebendaries and other dignitaries of the cathedral.

Many of the inhabitants were employed in agricultural pursuits in the surrounding country; many others were commercial men; some were employed on the river. Only a very

limited number of the adult males, of the 24,000 inhabitants, were artizans or mechanics.

The manufactures of Glasgow were few, and had acquired no celebrity, the articles made being coarse and homely. In 1667 a soap work had been erected on the site of the upper part of the present Candleriggs. Eight years later a small paper mill was built on the banks of the Cart, and eleven years later still was begun the manufacture of coarse linens, woollens, and plaids. In 1725 the weaving of lawns, cambrics, and gauze from home spun yarns commenced. 1730 a glass bottle manufactory was established. It stood on the side of the river, about midway between the present Broomielaw and Stockwell bridges, and so important in the estimation of the inhabitants was this new glass work, that in drawings then made of the town, as seen from the south, the conical brick building in which the glass was melted appears always greatly exaggerated in size. In 1740 a stocking factory, in 1742 a calico printfield, in 1745 a brewery, in 1748 a delft pottery were established—all on a very small scale.

These were the manufactures carried on in Glasgow when Mr. Anderson became Professor of Natural Philosophy, and his anti-toga class consisted of as many of the workmen from

these as he could induce to attend.

How small then was the chance, even although Mr. Anderson's life might extend to the full period allotted to man, that he would see any great result evolve from his labours, or that any portion of the scientific bread he so liberally cast on the waters would return to his sight. And yet, ere eight years were past, from the time of his appointment to the natural philosophy chair, an invention was made that has since revolutionized the world—an invention traceable directly to his enthusiastic endeavours to afford every aid in

his power to aspiring mechanical genius.

Professor Anderson had a brother, Andrew, some seven years younger than himself, having been born just about the time of their father's death. Andrew was sent to be educated in Greenock, and was the intimate school companion and friend of James Watt. In 1755 Watt went to London to learn the trade of mathematical and philosophical instrument maker, there being then no one who could teach him this in Glasgow. In little more than a year he returned to Scotland, and made arrangements to begin business in this city, on his own account. This, however, was opposed by the guild of hammermen, on the ground that he had not served such apprenticeship as would entitle him to become a member of

their craft; and only members, at that time, could carry on, in their own name, any mechanical trade. But this opposition that threatened to be fatal to Watt's prospects turned out to be one of the greatest pieces of good luck that could have happened to him. His intimacy with Andrew Anderson in Greenock, had brought him the friendship of Professor Anderson, and his mother's uncle, George Muirhead, was the Professor of Latin in the University. At various times great inconvenience had been experienced by the college authorities, from the want there was in Glasgow of some one who could keep in repair their philosophical apparatus. Watt's friends in the university took advantage of this, and urged the senate to appoint him mechanician to the college, and to give him a small shop within their own buildings, where the unfriendly hammermen had no jurisdiction. This was agreed to, and he had allotted to him a little room on the left hand side of the second quadrangle, a part of the old college still standing, and used in the meantime as a goods' store by the railway

In this new sphere the connection between Watt and Professor Anderson grew closer and closer. Watt's great desire was to perfect himself in the science of his art, and Anderson, in this, gave him all the assistance in his power. Williamson, the biographer of Watt, speaks of Anderson as "his early and attached friend, whose house, conversation, library, and valuable scientific apparatus had been at all times free to satisfy the strongly awakened exigencies of that inquisitive and

ingenious mind."

And now a most extraordinary circumstance was to occur. Mr. Anderson's predecessor in the natural philosophy chair had obtained for illustration in his class a model of Newcomen's steam engine. The model had not worked satisfactorily, and had been sent to London to be put right, but for some reason or other this had not been accomplished. A minute of the senate at this time bears that two pounds were paid to Mr. Anderson to have the model of Newcomen's engine brought back from London, and this little old fashioned machine Anderson put into the hands of Watt, to see what he could make of it. Of this every one knows the result. Steam had been a favourite subject of study and observation with Watt in his early days at Greenock. Great dreamy wondrous ideas had flitted through the boy's mind, of what might yet be done by the subtle power that lifted the lid of his aunt's tea kettle. The old thread of thought was taken up anew. Newcomen's engine, the best up to that time invented, he saw

to be utterly impracticable, and, with the aid of the model, now, by the kindness of Anderson, in his possession, he set himself with all his might to discover wherein lay the cause of the non-success hitherto attending all forms of the steamengine. How he worked at his problem day and night is matter of history, until, on a Sunday morning, when walking on Glasgow Green, and when just beside where the house of the Humane Society now stands, the thought of the separate condensing chamber flashed into his mind. At that moment, on that homely spot, with Sabbath stillness all around, a new era for mankind began.

This stupendous invention was Watt's own, and his only; and yet, just as certainly was it directly due to that assistance so unwearyingly and unselfishly given to Watt, and given to all who came under his benign influence, by the illustrious founder

of this institution.

Year after year Professor Anderson continued his philanthropic labour with ever increasing fervour, and almost every mechanic in Glasgow came more or less under his influence. It has been well said of him, that the distinguishing feature in his life and character was "a liberal and diffusive benevolence in regard to the instruction of his race." He had many quarrels with his colleagues; he called loudly for reformation of abuses in the management of the college, he believed its revenue to be misapplied, and he stirred up the Trades' House of Glasgow to send a petition to London, seeking for a royal visitation to the college to inquire generally into the manner in which its business was carried on. He was the best hated man in the university.

In 1786 he published a book entitled *Institutes of Physics*, which was much esteemed, and went through many editions. In 1791 he invented a new form of gun carriage, having an arrangement which, by water power, greatly lessened the recoil on firing. He offered this to the British government, who did not accept it. It was, however, adopted by the Republic in France, and his original drawing of it which he presented to them they hung up in their senate hall, and inscribed under it the words, "the gift of science to liberty."

At that time, the German government, being afraid of the spread of republican opinions among the people, placed an armed barrier all along their frontier, to prevent the importation of French newspapers, and all other literature deemed by them obnoxious. Anderson, always an extreme Liberal, suggested to those at the head of affairs in Paris that balloons should be constructed to carry communications between the No. 2.

people of the two countries. This was done and the prohibitive efforts of the German government were thus rendered futile. Each balloon carried a little flag with the inscription,

"O'er hills, and dales, and lines of hostile troops, I float majestic, Bearing the laws of God and nature to oppressed men; And bidding them, with arms, their right maintain."

As we all know, this balloon post of Anderson's was revived and carried out on a large scale during the environment of Paris in 1870-71. Not only letters and papers, but living people being carried safely out of the besieged town in full

sight of the German host.

In 1795, being then in his seventieth year, he made his will. bequeathing nearly everything he possessed for the foundation of this institution, and urging the trustees named by him to carry out this scheme, which he says is for the improvement of human nature, of science, and of the country where they live. His plan was, indeed, comprehensive, resembling very closely the scheme of education proposed by Knox at the time of the Scottish Reformation. Not only did it comprise a university with four colleges of arts, medicine, law, and theology; it included besides a school or academy to carry on the earlier part of education.

In his ideas, too, of the plan of teaching in each college, he was far before his day. At that time the university of Glasgow, like other Scotch universities, had but two professors in the medical faculty—the professor of anatomy and the professor of medicine. The college of medicine, as designed by him, was to include nine professors:—

A Professor of Institutes of Medicine.

,, ,, Practice of Medicine.

,, ,, Anatomy, and Theory of Surgery.

,, ,, Practical Surgery.

" " Midwifery.

" " Materia Medica.

,, Clinical Cases.

" Botany.

", " Natural History.

At the present time the teaching staff of the leading Scotch and English medical schools is almost literally in accordance with this scheme, designed by him more than eighty years ago. His will contains ample directions for the popular teaching of science; and also for lectures to ladies; for, he says, he wishes them to lay in such a stock of general knowledge as will make the Glasgow ladies the most accomplished in Europe.

In January, 1796, Mr. Anderson died. The trustees nominated by him accepted office, and, in the following June, proceeded as far as possible to carry out his will. The funds in hand would then but allow of the appointment of a single professor, and it was decided that he should teach chemistry

and natural philosophy.

At this time there was in Liverpool a young physician, Dr. Thomas Garnett, a graduate of Edinburgh, who, with his wife, had come there in the previous year, with the intention of emigrating to America. He had been a distinguished student of the celebrated Dr. John Brown, whose new theory of medicine he had most ably upheld in his graduation thesis on the subject of health. He had done what he could to get into practice, first at Bradford and then at Harrowgate, but without success; and shortly after his marriage he resolved to go to America, and give lectures there on natural philosophy and chemistry. While waiting in Liverpool for a ship, some friends induced him to give a few lectures, and so successful were they, and so well attended, that he was asked to repeat them in other towns, both in England and Ireland. In June of 1796 he was appointed the first professor of this college; and in the following November entered on the duties of his chair, and conducted his course on the plan prescribed by Anderson. His success was marvellous. He had 1,000 students in his class. Session after session added to his reputation; and he also began to do well as a medical practitioner, when, unfortunately for him, in 1799, he accepted an offer made to him by Count Rumford, to become the first professor of the Royal Institution, then just set up in London. The Count was desirous of beginning in the metropolis a course of instruction similar to that carried on by Garnett in the Andersonian; and in planning his new institution he had made careful inquiry regarding the nature and economy of this college. In London. as in Glasgow, Garnett was successful; his class room was crowded with persons of the first distinction and fashion. But he was soon sorely annoyed by the arrogant interference of Count Rumford, whose enormous self-conceit led him to meddle in everything. Poor Garnett, too, had just lost his wife in child-bed, and was not in a frame of mind to tolerate persistent worry and bother. The transactions of the second winter, his biographer says, almost completely undermined his constitution. In the summer he resigned, and tried to begin practice in London, and became physician to Mary-le-bone Dispensary, where, in a debilitated condition, both of body and mind, he caught typhus and died. He was the author, while in Glasgow, of a little work, entitled, Outlines of a Course of Lectures on Chemistry; and, after his death, his executor published a series of lectures he had given on the Laws of

Animal Life.

When Garnett resigned his chair here, a man was appointed to succeed him whose name subsequently became very famous—Dr. Geo. Birkbeck. He was a native of Yorkshire, and had studied medicine in Leeds, London, and Edinburgh. He was professor here from 1799 to 1804, and, like Garnett, taught natural philosophy and chemistry in accordance with the directions laid down in Anderson's will. He was an excellent lecturer, and was very popular. In 1804 he went to London, where he achieved considerable success as a medical practitioner. 1820 he once more turned his attention to the teaching of science, and, in the London Institution, gave a course of lectures. In 1823 he published a paper in the Mechanics' Magazine, advocating the erection of a Mechanics' Institute in London, and he also wrote an essay on the scientific education of the working classes. In November of that year, at a meeting held in the "Crown and Anchor," attended by Dr. Lushington, Jeremy Bentham, David Wilkie, Cobbett, and other distinguished men, and at which Birkbeck presided, it was resolved to form the London Mechanics' Institution, and the first office-bearers were appointed, Dr. Birkbeck being elected president. At first slowly, then very rapidly, other towns followed this example, and the most eminent men in the country took part in the movement. Soon every town in the kingdom, almost every agricultural village even, had its institution, with its news room and library, and evening classes, under the patronage of the great men of the neighbourhood. Scarce a place of any consequence is there in England but, in some street or other, you will find a building, more or less pretentious, with the words Mechanics' Institute over the door, and the date 1824, or from that onwards to 1830.

Lord Brougham's eloquent advocacy greatly assisted; and to him and Dr. Birkbeck has been very generally ascribed the honour of having been the founders of Mechanics' Institutes. Undoubtedly the great agitation of 1824 and the following years was chiefly owing to them, but they were not the originators of the movement; that began in Anderson's class room, in Glasgow, nearly twenty years before Birkbeck was born. And he and Brougham but sowed, in new soil, seed from the little plant that, for forty years, Anderson so carefully and lovingly tended, and for whose welfare, when he would no longer be by, he provided in the foundation of this institution.

Meantime, while these events were transpiring in London and throughout the country, this college was thriving. In the year 1800 a professor of Surgery had been appointed, and the first incumbent was John Burns, the son of Dr. Burns, so long minister of the Barony church. The surgical lecture room was then at the north-west corner of Virginia Street. In the year previous to his appointment he published a work that is still famous—the Anatomy of the Gravid Uterus. In 1800, the year of his appointment, he published another work on In 1806 a third treatise followed, entitled Inflammation. Observations on Abortion, in 1807 another work—Observations on Uterine Hemorrhage, and in 1809, the most famous of all his works, his celebrated Principles of Midwifery, that was translated into almost every European tongue. In 1815, when George III founded the chair of surgery in the university, Dr. Burns was translated thither, and held that position until 1850. His chair in the Andersonian does not appear to have been filled up for three years, when, in 1818, Dr. Granville Sharp Pattison was appointed to it, but he held it only for one year, and in 1819 was succeeded by Dr. William M'Kenzie, who became the most celebrated oculist in Europe, and whose great work, Practical Treatise on Diseases of the Eye, was translated into French, German, and Italian. He was the founder of the Glasgow Eye Infirmary, and in 1828 he was appointed Waltonian Lecturer on Diseases of the Eye to the University of Glasgow.

He was followed in 1829 by Dr. James Adair Lawrie, who was professor of surgery here for thirty-one years, when, on the death of John Burns in 1850, he, too, went to the regius chair in the university. He did little in the way of authorship, but the profession reposed great confidence in his surgical skill and ability, and for many years he was the leading consultant in the West of Scotland. Since he left it, this chair has been held successively by Dr. Robert Hunter for ten years, by Dr. Geo. H. B. Macleod for nine years, and by Dr. James Dunlop since 1869. This, then, is the oldest of the purely medical chairs, having been, as I already said, instituted in the first year of the century.

When Dr. Birkbeck left the Andersonian, as we have seen, in 1804, to go to London, he was followed by Dr. Andrew Ure, one of the most celebrated of Scottish chemists. He held the chair for the long period of twenty-six years. He resembled Anderson more than either of his predecessors; for besides being an able popular teacher, he was an eminent scientific worker, and, like Anderson, all he did in the way of research

had a highly practical aspect. He directed his attention chiefly to the application of science to the arts and manufactures; and with persons engaged in these, his class rooms and laboratories were thronged. In 1821 he published his great Dictionary of Chemistry, which went through many editions, and was translated into more than one Continental tongue. In the preface to this, he gave an interesting account of his manner of educating his popular classes. While in this college he published many important papers. One of them was entitled "Experimental Researches on some of the leading Doctrines of Caloric, particularly on the relation between Elasticity, Temperature, and Latent Heat of different Vapours, and on Thermometric Admeasurement and Capacity." Another paper on "Mean Specific Gravity." Another on "Experiments to determine the Constitution of Liquid Nitric Acid, and the Law of Progression of its Density at Various Degrees of Dilution." Another on "Sulphuric Acid and Law of Progression followed in its Densities at Different Degrees of Dilution." Another paper on "Muriatic Acid and Chlorine," in which he described his Endiometre which he invented to carry out the experiments detailed in this paper. Still another paper, on the "Ultimate Analysis of Vegetable and Animal Substances." He also published A New System of Geology. Having to teach materia medica for a short time, at the request of the trustees, before that chair was formally established, he published a "Systematic Table of Materia Medica, with a Dissertation on the Action of Medicines."

In 1830 he resigned his chair and went to London, and advantage was taken of the vacancy to establish a separate chair of natural philosophy, so that the next incumbent might give his undivided attention to chemistry. The new professor, Thomas Graham, was by far the most distinguished chemist who ever held a chair in this college. He taught here from 1830 to 1837, and in those seven years the amount of work he did was simply astounding. His papers were so numerous that I dare not trespass on your time and patience by going over their titles. But the principal of them were relations of the discoveries he made regarding the Diffusion of Gases, and his researches into the constitution of Hydrated Salts. He became famous all over Europe, and in 1836 was elected to the chair of chemistry in the University of London, and afterwards appointed Master of the Mint. In London he continued his scientific investigations, and published, in the Transactions of the Royal Society, his celebrated papers on "Dialysis." After his death, and in commemoration of his

having been born in Glasgow, and having been a professor here, a statue was erected in his honour at the south-east corner

of George Square.

An able but very erratic man succeeded Graham, Dr. William Gregory, who held the chair for two years only, when he was appointed to the chair of medicine and chemistry, at King's College, Aberdeen. He had been an earnest student of Liebig's, and he taught here, with great enthusiasm, the new chemical theories of his master, and translated several of his works into English. In later life, when a professor in Edinburgh, he became a mesmerist, and published a book on mesmerism and clairvoyance, in which are narrated most wonderful stories of persons seeing and hearing what was taking place hundreds

of miles away.

When he left the Andersonian, Dr. Frederick Penny was elected to succeed him. Of Penny I can speak from personal knowledge, as I had the great privilege of being one of his students. His success as a teacher of chemistry was almost without a parallel. In this room he taught the largest classes of chemistry that, up to that time, had assembled under one roof, to be taught by one teacher. His faculty for illustrating difficult portions of his subject was wonderful; into the most obscure recess of organic chemistry he would flash a beam of light, which would so illumine the abstruse problem, that, without conscious effort, it was clearly apprehended by the hitherto groping student, and never afterwards forgotten. On one occasion, standing where I now stand, and addressing an audience that filled this hall, he desired them to understand clearly the nature of isomeric compounds. After giving the usual definitions, and the ordinary example of oil of turpentine and oil of lemon, which have not only the same kind of elementary atoms, but also the same number and proportion of these atoms, and yet have different properties; I say, after enunciating the usual proposition of the text books and lecture rooms, he led us, in imagination, to the studio of a painter, and pointed out the thousand tints and shades of colouring of foliage and flower, cloud and sky, landscape and water. He then called attention to the small number of original pigments on the artist's palette, and spoke of the painter's wonderful skill in producing from so few, such innumerable variety, merely by mixing the same colours in slightly different proportions. Then, pointing to his isomeric compounds he said, the divine artist takes the same things in the same proportions, and from these constructs substances infinitely diverse. did not need again to return to the subject of isomerism.

He was highly distinguished as an analytical chemist; and as a scientific witness in a court of law he had no equal. His evidence in the celebrated cases of Madelaine Smith and Dr. Pritchard called forth the warmest approval of the presiding

judges.

It has been frequently said of him that, after all, he was more of a mere teacher of chemistry than a chemical discoverer; and, no doubt, in his later years he did but little in the way of original investigation. But in his early days at the Andersonian it was very different. In 1839 he conducted a series of researches regarding the atomic weights of chlorine, nitrogen, silver, potassium, and sodium. The results arrived at I have placed in this table, and in a parallel column the numbers given by Staas, more than twenty years later, and which are now universally received throughout the chemical world.

		Staas.	Penny.	
Cl		$35^{\circ} \cdot 457$		35°·45
N.		14°.044		14°·02
Ag.		$107^{\circ}.930$		107°.97
K.		39°·1 37		39°·08
Na.		23°.045		23°.05

And you see that, in 1839, Dr. Penny did the work that Staas did over again in 1860, and for which the foreigner now gets the sole credit.

When Dr. Penny died in 1870, Mr. James Young, of Kelly, then president, and still, I am glad to say, a manager of this college, in the most liberal and public spirited manner, set aside the sum of £10,500 to endow a chair of technical chemistry, and for the accommodation of this class he is, at the present time, erecting, at a further great cost, laboratories and class rooms which, when finished, will be the most complete of their kind in the kingdom. No one since the time of the original founder of this college has taken a warmer interest in the spread of practical science in Glasgow than Mr. Young; and certainly no one, by pecuniary aid, has done so much to encourage it. Of the present incumbents of the chemical chairs it would, of course, be entirely out of place on my part to say anything.

In point of antiquity, the chair of Botany ranks next after chemistry and surgery, having been founded in 1816. Mr. Roger Hennedy, the late incumbent, had a very high reputation as a Scottish botanist, and he was the author of the Clydesdale Flora, a work that is extremely accurate, and very

comprehensive, and has gone through several editions.

In 1825 the professorship of Mathematics was established, and the present much respected professor has held office for the long period of thirty-two years. His predecessor was the now greatly celebrated mental philosopher, Professor Alexander Bain, of Aberdeen.

In 1828 four new chairs were added to the college—anatomy,

midwifery, practice of medicine, and materia medica.

The first professor of Anatomy was Mr. Robert Hunter, and so successful was he as a teacher that, in 1841, he was solicited by the Westminster Hospital School of Medicine in London to take the chair of anatomy there. He did not, however, feel at home in the metropolis, and in 1850, when Dr. Lawrie resigned the surgery chair here, Dr. Hunter sought and obtained it, and

taught this subject until he died in 1860.

The second incumbent, Dr. Moses S. Buchanan, was for thirty years well known by the whole profession in Scotland, as a most enthusiastic teacher of anatomy, and as an eminent and successful surgeon; and in his time the medical school became more prosperous than it had ever been before. He was the author of a very important paper on the surgical anatomy of the subclavian, brachial, and femoral arteries, in which the suggestion was made for the first time I believe, that the subclavian might, in certain cases, be advantageously tied in the middle part of its course. He also wrote an able and original article on "Excision of the Joints." At his death he was followed by his son Dr. George, now professor of clinical surgery in the university, whom hundreds of Andersonians scattered over the world hold in most kindly and grateful remembrance. In turn after him came the present occupant of the chair, of whom I do not need to speak.

The chair of Midwifery has always been ably filled. The first professor, Dr. Armour, was a most accomplished classical scholar, being famous in his day for his knowledge of the language and literature of ancient Greece. He was the author of two papers that, at the time of their publication, attracted much attention; the one entitled "Remarks on Insanity;" the other, "Remarks on the Action of Ergot of Rye." The immediate predecessor of the present professor, my own old teacher, Dr. James Paterson, now an Andersonian trustee, was one of the most entrancing lecturers I ever listened to, and had he published his lectures when he resigned the chair he would have

conferred a boon on the whole profession.

Of the five gentlemen who, besides Professor Charteris, have lectured here on the Practice of Medicine, only two are dead. One of these, Dr. Andrew Anderson, was a grandnephew of

the founder, and no man was ever more cordially esteemed and venerated by students than he was, and the most painful regret was felt by all connected with the Andersonian when failing health, in 1863, compelled him to resign his charge. He was the author of many valuable papers, among them being "Observations on Typhus," published in 1845, "Post-febrile Ophthalmitis," in 1846, and on the "Cause of Scurvy," in 1847. In 1861 he published a work, specially for the students of his class, entitled Outlines of a Course of Lectures on Medicine. But by far the most important of his works is his Lectures Introductory to the Study of Fever, which forms, I believe, the most clear and lucid exposition of the subject in the English

language.

The first occupant of the chair of Materia Medica was Dr. Andrew Buchanan, who held it for ten years, until 1838, when he was appointed Regius Professor of Institutes of Medicine in the university. But although only ten years in this college, he made, while here, that contribution to science for which his name will for ever be held in remembrance. Prior to his time, many investigations had been made, and much had been said and written concerning the fibrin of the blood and the phenomenon of coagulation, but no one had suggested that, in the living blood, fibrin did not exist as such, no one doubted that in the blood coursing through the arteries and veins it really was present in a liquid form, and investigation had only taken the form of endeavours to determine the causes that brought about the precipitation or solidification of the already pre-existing fibrin. But observations of the behaviour of pathological serous exudations, and afterwards most carefully conducted experiments, led Dr. Buchanan to form the opinion that in normal living blood there is no fibrin. He taught that fibrin is formed in the process of coagulation, by the union of at least two distinct substances, one already existing in the liquor sanguinis, and the other liberated from the blood corpuscles after exudation from the body; or under certain morbid conditions actually within the living body itself. When Dr. Buchanan, first to the Philosophical Society of Glasgow, and subsequently in the Medical Gazette for 1836, gave the first sketches of his new theory, very many members of the profession thought little of his theory, and until quite recently the text books of physiology gave his views only a passing and very imperfect notice. But within the last few years substantially the same views have been wafted across from German laboratories, and Schmidt has actually succeeded in isolating the component factors of fibrin. And this isolation

is exactly Schmidt's share in the matter, except that he imagines the presence of a ferment to be theoretically necessary. All teachers and books now give a prominent place to the theory, but curiously many of them most ignorantly attribute wholly to Schmidt what are only Dr. Andrew Buchanan's views, made more exact certainly, but withal somewhat disfigured by a new, clumsy nomenclature.

Dr. Buchanan's successor in the chair was Dr. William Hooker, the uncle of the present president of the Royal Society, Sir Joseph Dalton Hooker, whom, a few months ago, it was proposed to make Lord Chancellor of the University of Glasgow. The present professor has held office since 1855, and I am sure we all congratulate him on the circumstance that, within the last fortnight, his treatise on "Spina Bifida" has

been translated and published in France.

The chair of Medical Jurisprudence was established in 1831, and has been filled in succession by Mr. George Watt, Dr. John Crawford, Dr. J. B. Cowan, Dr. William Leishman, Dr. Pierce Adolphus Simpson, and Dr. Alexander Lindsay. Dr. Cowan, in 1856, the year of his appointment to the chair, conducted a series of experiments which went far to show that the poisonous effects of strychnine could be held in check by the continuous administration of chloroform, until the total elimination of the poison from the system had been effected. These were among the first experiments performed, by which has been demonstrated the mutual antagonism of action of certain medicines.

Prior to my own appointment, the Institutes of Medicine class has been taught by Dr. Andrew Anderson, Dr. Maxwell Adams, and Dr. Eben. Watson. I was a student of Dr Watson's, and such was the simplicity and logical arrangements of his lectures that, even at this distance of time, I could repeat many

of them almost word for word.

In 1869, by the liberality of several individuals, a lectureship on Ophthalmic Medicine and Surgery was endowed, and Andersonian students have the privilege of attending free of charge.

Last summer Dr. James Christie was appointed Lecturer on Public Health to this college, by recommendation of the

medical faculty.

In the spring of this year a dispensary for the treatment of the sick poor was opened in the college buildings, and is now being carried on by a most able and energetic staff of physicians and surgeons. Besides attending to such patients as are able to come to the dispensary, the more serious cases are visited at their own houses, and the senior medical students are in this way educated as to the manner of conducting themselves in private practice a part of their training that, in Glasgow, has hitherto been entirely neglected. From the day that the doors were opened, the dispensary has been largely taken advantage of, and within the last six months no fewer than eight thousand

poor persons have been prescribed for.

The medical school, then, of this college, has been in existence, in a form more or less complete, since the first year of the century, when John Burns began to lecture on surgery under its auspices. During that time very many of the most distinguished physicians and surgeons of Glasgow have been connected with it. It very early became, with only some six or seven exceptions, the largest medical school in the United Kingdom, and, in its time, it has sent forth several thousands of medical practitioners; many of whom have attained to eminence, and a few to very great distinction. Four names among Andersonian students stand out very conspicuously; two of them purely medical, Dr. David Livingstone and Dr. Benjamin Ward Richardson; two of them chemists, Dr. Lyon

Playfair and Mr. James Young, F.R.S., of Kelly.

I have thus, gentlemen, very imperfectly I know, endeavoured to bring before you some of the leading events in the history of this college, and in the life of its generous founder. To you who, this day, are setting sail in unknown waters, it must be of consequence to hear something of the experience of those who have made the voyage before you. Anderson and others whom I spoke of to-day attained to great eminence, and their deeds live after them. This greatness was not reached in virtue of anything peculiar to the times they lived in, or to any singularity in their surroundings. It is as open to you as to any who have gone before, so to work in your profession as to command the commendation of your contemporaries, and the respectful remembrance of those who will follow you. You will all succeed if you all work for success; this is as unalterable and inevitable as the law of gravitation. The old border chief, the ancestor of the great house of Buccleuch, said to the English queen, in explanation of some heroic achievement, "Whate'er a man dares he can do;" and most men who do much are of his way of thinking. The great profession you aspire to enter is worthy of every effort you can put forth. No man ever regretted work done in relief of human suffering; and from the day you obtain your diploma, that will be the work of every one of you. Men's lives will be in your keeping. In the coming months, then, of this

session, and in all the sessions of study yet before you, do your duty here, so that when the time of responsibility comes you may be prepared for it, equipped at all points, and in your war with disease, wielding your weapons with consummate skill. In Egypt, Napoleon reminded his soldiers that from the pyramids forty centuries looked down on them. Our profession is older than the pyramids—all the centuries of the world's history look down on you.

CASE OF ABSCESS OF THE LUNG.

BY JOHN MOYES, M.B., C.M., CAMBUSLANG, Formerly Resident Assistant in the Glasgow Western Infirmary.

THE following case was admitted to the Glasgow Western

Infirmary, under the care of Dr. Finlayson:

Francis Cunningham, setat. 52, fireman in a gas-work, proceeded to his work as usual on Monday morning, 11th June, but, feeling a little "out of sorts" returned home. He was then attacked by shivering, vomiting, and diarrhoea, with great thirst and shortness of breath. He had suffered for some time before from a chronic cough; this remained without aggravation, but the expectoration accompanying it became of

a rusty colour.

He was admitted into the Western Infirmary on 19th June, 1877, being the ninth day of the illness. On admission, he complained of soreness over the right lower part of the chest, extending round to the back, and increased by movement or coughing; also of slight pain over the abdomen and lumbar region, of great sickness and weakness, and of diarrhea. He lay for the most part on his back, or on the painful side. His tongue was thickly coated with a brown cracked fur, and he had constant and harassing thirst. Pulse 100; respirations 28; temp. 100°.2 F.; urine acid, sp. gr. 1011; no albumen, but a deficiency of the chlorides.

On physical examination of the chest we found dull percussion in the right back, below the spine of the scapula, shading off into the normal note in front; in the same region the breathing was tubular, accompanied by coarse crepitus; in front the percussion was normal, but crepitus was heard with equal distinctness during inspiration and expiration, the expiration being somewhat prolonged. On both sides in front, snoring and wheezing râles were occasionally heard. The sounds of the heart were pure, and its position was normal.

He was treated by opium and quinine, and the diarrhoa abated in two days, but in other respects the patient's condition grew worse. He became more prostrate, talked and muttered a good deal during both day and night; his tongue became extremely foul and dry, almost black, and there was considerable trembling of the limbs. He did not cough much, and brought up no spit. The signs in the chest remained the same. On 26th June (the fifteenth day of the illness) his condition slightly improved; he had slept moderately well, and felt better. The diarrhoea, however, had returned to the extent of three loose and rather light-coloured motions in the twenty-four hours. This continued next day, although his condition, judged from his general aspect, still improved, and the appearance of his tongue became better, but it was still extremely foul and dry. The moist râles and the wheezing continued on the right side, but the dulness seemed to be rather less. He had been complaining for a day or two of stiffness and pain in his knees or legs, and on this day there was found to be effusion into both knee joints, with a little redness on the internal aspect. Two days later this effusion had almost disappeared, the tongue had become cleaner and more moist, the general improvement had continued, the patient being able to stand and even walk across the floor, and he was taking his food moderately well. The bowels were still loose, to the extent of four or five motions daily. He remained pretty well for three days, the diarrhora being much the same, and the abdomen still rather swollen, though not tender. The knee joints had apparently quite recovered. On the afternoon of 2nd July he became more flushed, and complained of pain in the right side, and on auscultation a good deal of moist râle was found. The temperature (of which the highest record since admission had been 101°6 F.) rose on this evening to 103°8 F. Next morning (3rd July) it had again fallen to 100° F., and the râles were less abundant than on the previous night. The chest, at the back, still gave a comparatively dull note, and the respiration was somewhat bronchial, but distant at the bases. The bowels were still loose. Up till this time the expectoration had been extremely scanty, but on 3rd July a large quantity (16 oz.) of purulent matter, having a bad smell, was brought up without much coughing. The diarrhoea ceased on this day, and did not return. The expectoration of pus continued till his dismissal nine days later. During the second, third, and fourth days it

amounted to about 12 oz. in twenty-four hours, gradually diminishing to 6 oz. at his dismissal. No feetid smell was observed after the first day. The sputa were examined microscopically, both with and without digestion in soda. By both methods numerous fragments of lung tissue were found. There were occasionally streaks of blood in the sputa, but no blood-crystals were found with the microscope. The temperature, on the evening when the expectoration began, reached 102° F., next morning it fell to 99°.8 F., remaining a few tenths above that until his dismissal. On the second day after the expectoration (5th July) no change was observed in the physical signs in the chest, although careful examination was made, but on the morning of the next day (6th July) a coarse moist râle, with a somewhat hollow quality, was detected in the lower part of the right lateral region. The relative dulness on percussion continued. Two days later, we recognized at times in the upper part of the dull area a distinct amphoric quality of the breath-sound, and also little tinkling râles. times, also, especially when the patient spoke with a loud voice, a kind of echo was heard. Careful attempts failed to produce succussion sounds. In front, the percussion was very little altered, and the respiratory murmur was good at both apices. No abnormality could be made out in the sounds of the heart. The cavernous signs became more developed, and three days later were present in the most marked form—viz., metallic tinkling, amphoric resonance with the breath sounds, and occasionally, also, with the cough and voice. During these changes the patient's condition steadily improved; his tongue gradually became clean, he slept better, took his food well, and at his own urgent request was allowed to leave on the 13th July, although otherwise, his dismissal would not have been thought of. Five days afterwards he returned to be examined. The cough and spit were much as before; amphoric signs were still present, but there was not much râle. The percussion in front had a curious tympanitic quality. days later he again returned. The chief change consisted in a diminution of the expectoration to 3 oz. in 24 hours. The hollow breath-sound was still heard at the lower angle of right scapula, but there was no metallic tinkling, and none of the strongly marked amphoric phenomena. The patient was sent to the Convalescent Home for three weeks. On his return there was still comparative dulness of the right side, but no indications of cavity. Two days later the expectoration had entirely ceased, the cough still continuing slightly. Remarks.—That this was a case of abscess of the lung was placed beyond doubt by the sudden expectoration of a large quantity of pus, rich in pulmonary fibres, and by the development, in the course of a day or two, of a cavity in the lung. Up till that point the diagnosis was obscure. Almost on admission, the idea of a pulmonary embolism was entertained, but nothing very definite could be adduced in support of this view. As the case went on, the great prostration, the extreme foulness and blackness of the tongue, the muttering delirium, and the continued diarrhoa, suggested the idea of a specific fever; but the patient had already had typhus fever and small-pox; there was at no time any appearance of a rash, and the course of the temperature was not that of any of the known fevers. The effusion into the knee joints suggested, on the other hand, some pyremic affection, but this was too transitory to justify such a view, and, in short, the true nature of the case was not established until the expectoration of the pus took place.

DATE		TEMPER	ATURES.	Incidents and Physical Signs.
DATE	4.	Morning.	Evening.	INCIDENTS AND THISICAL CIONS.
June	19		100°·2	
,,	20	99,	101°·6	Dull percussion in right back with tubular breathing and coarse crepitus.
,,,	21	100°.8	99^8	
,,	22	100°·8	998	
1 . ,,	23	99.8	98°.8	
	24	99,.4	100°·2	
	25	99,.3	100°	77.00
77	26	99°	100°	Effusion into knee joints.
77	27	98°.4	99°·4 101°·4	Diminution of effusion.
77	28	99°.2 99°.6	99°.8	Diminution of enusion.
77	29	99°.6	100°	
	30	100	100°-8	
July	2	99 %	103°.8	Increase in amount of râle, but no other change.
22	-			(Expectoration of 16 oz. of pus in 24 hours,
,,	3	100°	102°	and cessation of the diarrheea.
,,	4	99°.8	99°	
22	5	98°.2	99,.6	
22	6	98°·4	99°.8	Coarse râle of hollow quality.
22	7	98°.6	99°·2	(A . 1 liter of breath county and other
"	8	995	99°•2	Amphoric quality of breath-sound, and other signs of cavity.
,,	9	997.8	99°4	
	10	98°.8	100°.2	
22	11	99°·2	99°.8	
59	12	99°.8	99°.8	D' ' 1
22	13	99,.4	• • •	Dismissed.
			-	

The accompanying statement shows the relation in which the temperatures, the principal symptoms, and the physical signs stand to one another, and brings out the points of interest in the case. The effusion into the knee joints took place on the sixteenth day of the illness, and is worthy of remark from its extreme ravity in connection with pulmonary abscess. In one case related by Trousseau, the illness began by a pain in the left shoulder, suggesting an attack of "articular rheumatism," but in no other recorded cases have we found any mention of an affection of the joints, although the occasional occurrence of articular affections after pneumonia and fevers is not uncommon.

The expectoration of the pus, which was the turning point of the case, took place on the twenty-third day of the illness. Immediately before this there was an accession of the fever, with a marked rise of the temperature, and an increase in the amount of rale. At this time, the diarrho-a, which had been a pretty constant feature, ceased suddenly, and did not return, and the temperature fell, remaining a little above normal till his dismissal. The signs of a cavity appeared two days after the pus began to be expectorated. At the end of twelve days more they were still present, but beginning to disappear, and three weeks afterwards no trace of them was found.

Trousseau, in speaking of the diagnosis of pulmonary abscess from other collections of pus, either between the lobes of the lung or in the pleural sac, lays great weight upon the period at which expectoration takes place in the former, not later than the twenty-fifth day, in the latter, on the fortieth, fiftieth, or sixtieth,; and also upon the quantity of the pus. Microscopic examination of the sputa gives further data for the differential diagnosis. In this case the fragments of lung tissue were so numerous that several pieces were found in one microscopic field, from a drop of the spit, without preparation of any kind.

In one case, it is related, that the illness followed upon exposure to cold, in passing out of the heated air of a ball-room. In this case, the patient's occupation, that of fireman in a gas work, exposed him to great changes of temperature, but he had pursued it uninjured for twenty-six years, and, in point of fact, he first felt ill on Monday morning, having been at home on the Sunday. Nothing else presented itself as a likely cause.

The treatment consisted in the administration of quinine, opium, bismuth, and chalk mixture, given principally to control the diarrhora. The patient was also allowed a little wine. It

only remains to be added that he was seen about eight months after dismissal, and was then pursuing his old occupation, and enjoying, to all appearance, good health.

CASE OF OVARIOTOMY, IN WHICH RECOVERY TOOK PLACE AFTER A LONG CONTINUANCE OF SYMPTOMS OF LOW PERITONITIS.

BY GEORGE BUCHANAN, M.A., M.D., Professor of Clinical Surgery, in the University of Glasgow.

The interest of any communication connected with ovariotomy rests on a very different basis from what it did twenty years ago. Then, the operation had to be defended by argument and reference to well known published cases. Now, it is one of the most widely recognized of the proceedings of surgery. Recent papers are, for the most part, compilations of statistical details, and little, if anything, seems left to be written on the subject. Nevertheless, there are some points which will never lose their interest for practical ovariotomists—viz., the diagnosis of the nature and connections of the abdominal tumour in doubtful cases; second, the complications which sometimes are only discovered during the operation; and third, the after treatment in cases where unexpected inflammatory or other

attacks interfere with the progress to cure.

In my own experience I have had examples of all these causes of anxiety; but never have I had one in which the final result lay so long in the scale between recovery and death, and not one in which I can say with more certainty that recovery was only ultimately secured by the unremitting attention of the Sister and nurse in charge, and the careful watching and detailed minuteness of treatment by Dr. Seton Orr, my house surgeon. I have very great faith in expectant treatment, and in the Vis Medicatrix Nature; but, without question, my patient was snatched out of the very jaws of death, by the faithful nursing. On more than one occasion, on an evening visit, I came away without the hope of seeing her alive next morning; yet, by the judicious use of subcutaneous injections of morphia; by the careful exhibition of stimulants in little more than drops, by nutrient and stimulant enemata, the critical period of the night was got over, and slight amendment took place in the morning. The following is a short report of the case :-

Mrs. H., aged 34, admitted 18th September.—Patient has had four of a family, her last confinement being 9 years ago. Menstruation regular throughout her present complaint, general health good. She eats and sleeps well. She is very much emaciated, but she states that she has always been a spare woman.

Her complaint began about four years ago, when she noticed a swelling about the size of a hen's egg in her right groin. This swelling gradually increased, until now the abdomen is uniformly and greatly distended. For the first two years it was accompanied by considerable pain, and there was also pain and difficulty in making water, but these have almost completely gone. Fluctuation is easily made out in the tumour, and the whole abdomen is dull to percussion. At the level of the umbilicus the abdomen measures in circumference 44 inches.

Urine, which has been rather scanty all along, is pale in colour, slightly acid in reaction, sp. gr. 1017, and contains no albumen. Patient is of a most cheerful disposition, and is

quite willing to undergo the operation of ovariotomy.

The operation was performed on the 15th October, under the carbolic spray. There were considerable adhesions to the omentum and the abdominal walls. Fluid drawn off amounted to 480 ozs.; of very dark colour, containing a large quantity of blood and albumen, but no cholestearin, or paralbumin. The pedicle was secured by ligatures of carbolized catgut, and returned into the abdomen.

For the first 24 hours patient was fairly well; but as soon as reaction set in the temperature rose to 102°, and remained high for a long time. On the second day began the symptoms of asthenic peritonitis, which continued, with variations of more or less intensity, for a month. Throughout, the pain, as is often the case, was not a prominent symptom. There was vomiting so continued that for days no nourishment could be retained, and it recurred frequently. There was abdominal distension—at one time so great that I was on the point of performing colo-puncture. Diarrhoea was a troublesome symptom, interfering with the use of nourishing injections. The pulse was always high, sometimes intermitting, and sometimes too small to be counted. For some days the lips and fauces were covered with aphthous patches and ulcerations, which prevented her taking food. The urine was for a long time albuminous, sometimes purulent and putrid. All these symptoms were combated as they arose, as will be seen by the tabular report annexed, which was kept by the Sister under the direction of the house Surgeon.

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94 Dinta of Whith in Ornet 1	H - +	Ice-no voniting-little pain.	Restless and feverish in afternoon.	Voniting began at 5 p.m., continued till 9 p.m. (Thampagne and ice, m. on Much pained No clean. Thunk 1 nt mill.	Champagne and ice. Some sleep dorp. Statement for many. The form of the statement of the st	oz, b	p.m., and 70 at 2 a.m. Scarcely any sleep. Slept a good deal. Teacupful of tea and small biscuit and a little brandy.	Uniterwise same as yesterday. Continued food enemata. Slept a good deal. Drank 1½ pts. milk and lime	water. Vomited a little. 60 m. op. at 2 a.m., and slept better. Enemata as usual. Vomited at 11 a.m. Chicken tea in afternoon. Porridge	and butternilk at 6 p.m. No opium. Slept from 2 a.m. till 5 a.m. Wound dressed & looking well. Porridge and butternilk morning & night.	Tea and chicken tea. Dosed between 4 and 9 p.m. Neepless m Restless and uncomfortable. Enema of soap and water at 12:30 a.m.	same as yesterday. No food enemata after to-day. Better night. Vomited several times. Very much troubled with wind. 5 grs. calor	7 p.m. and enema at 11 p.m. Food the same as before. Much pained. Soap and water enemagave relief. Vomited once.	usual. 00 m. op. at midnight, after which she slept. Better to-day. Food as usual. Slept a good deal both day and night. No	pani—no vomiting. Vomited breakfast. 1 oz. castor oil at 11 a.m. did not operate. Great	so ii
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99°-8/100°-2/136/30 Bowels moved 6 times. Vanited once. Took her food and a little brandy,	II all Boy	about a nours. Feeling better. Ate some steak. Suffered much pain to-day from wind, but got relief when it came away. Took food well. Slept little all night.	Had a good day, Took food well. Hypodermic injec. morphia at night,	and stept well. Dowels moved twice. Food as usual, Jowels moved 4 times. Much pain, Injec. of 60 m. opium.	Appetite not so good. Bowels moved twice. Injec. of morphia. No	Bowels moved 4 times before 4 p.m. Starch and laudanum injec, twice	again before munight. Another miles. No steep till 4 a.m. Much the same as yesterday, the somewhat better. Taking eggs, chicken	Soul, butterining, et a rule or range. Feeling better. Bowels still loose. Starch and landanum injec., and slept	Sat up in the easy chair from 2 till 6. Otherwise same as before. Stitches	Patient by Appetite good. Sat up from 2 till 6. First natural motion	Going on well.	The same,	Continuing well. Had a little sherry in whisked eggs, which probably	raised centerature. The same. Bowels more regular and natural.	As before,	As before. Temperature gradually went down. Patient went home on 25th Nov., able to walk about easily and feeling well.
30	30	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
136	136	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
100°-2	100.6 101.6 136	102.2	8.101	101.2	103.	101.6	100.5	100·s	100.4	100.4	101	100.4	102.	100.4	100.	100.2
		102.	102.4	102.6 102.2	103	2.101	100.0	100.8	100.5	100.	101.2	101 101.4 100.4	102.	101.2	101	100.4
8.66	.001 8.66	99.8 101.2 102.	100-4 101-8 102-4 101-8		8.101	100.4	99.4	100.2	8.66	8-66	100.4		99.8 100.2 102.	98.6 100.2 101.2	100.4 101.	99.6 100.2 100.2 100.4 100.2
29 102°-2 101°-2 100°-8	8.66	8.66		9.101	9.66	101	98.4	99.4	.66	99.4	8.66	99.5	8-66	9.86	9.66	100.5
101°-21	.66	8.66	100.	100.4	100.	100.6	100.	8.86	.66	8.66	.66	100.5	8.66	.66	7-66	9.66
1050.51	99.4	31 100.6	lov. 101.4	101.	101.2	8.101	101.	100.4	100.5	8.66	9.001	8.66	100.2	100.	100.	14 100.
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CURRENT TOPICS.

REPORT OF THE BRITISH MEDICAL ASSOCIATION COMMITTEE ON AN.ESTHETICS.—At the meeting of the British Medical Association, in Manchester, in 1877, a committee, consisting of Dr. Joseph Coats, Dr. William Ramsay, and Professor M'Kendrick, was appointed to investigate the action of aniesthetics. This committee has recently given in a preliminary report, which has appeared in the British Medical Journal for 4th January, and to which we must refer our readers for details. After many experiments on frogs, rabbits, and dogs, the committee have noticed, with greater certainty than hitherto, that chloroform has an injurious influence on the heart. By a special method of experimenting they saw that, during the administration of full doses of chloroform, the right side of the heart becomes distended and engorged with blood, the irritability of the organ quickly disappears, and death ensues. This effect on the heart, in ordinary cases, is, of course, complicated by interference with the respiratory mechanism, probably by chloroform acting on the respiratory centres in the medulla. To avoid such complication, the committee, in many experiments, kept up artificial respiration, and watched the effect on the heart itself, with the same result—distension of the right side, loss of irritability, and death. It is therefore desirable to find an anæsthetic which would not act injuriously, even in full doses, on the heart or on the respiratory centres, and which, consequently, would be safer than chloroform. After trying various substances which, from their chemical composition and affinities with chloroform and other anæsthetic agents, might have anaesthetic properties, they have found two substances which promise to be useful. These are isobutyl chloride (C, H, Cl), and ethidene dichloride (C, H, Cl,). The latter substance has been used in Germany by Steffen, and is reported on most favourably, as has been discovered a few days ago by a notice in the translation of Binz's Elements of Therapeutics. The action of both substances is similar, and it is especially of importance that neither seems to have any injurious effect on the heart's movements. illustrate this, with reference to ethidene dichloride, we quote from the committee's report:-"Two experiments were made on dogs, in which the heart was exposed, artificial respiration being kept up. No failure of the heart's action was observed, although the air passing into the lungs was saturated with the vapour of the substance. There was complete anæsthesia. On quickly removing the bottle containing ethidene dichloride, and substituting chloroform, the right side of the heart began almost immediately to become distended, and to be dark in colour, and the activity of the heart rapidly failed."

Both substances have also been given to dogs, without observing any injurious effect on the mechanism of respiration. This part of the inquiry, however, will receive the further

attention of the committee.

In addition to these investigations of practical interest, the committee has been making inquiry into the actual physiological conditions of anesthesia, and in particular they have attempted to examine the questions of how anesthetics (especially chloroform) affect the composition of the gases of the blood, and the gases of respiration. At present, from the complicated nature of the experiments, and the many sources of fallacy to which they are exposed, they have not thought it

right to report results.

The discovery or invention of a safe anæsthetic is undoubtedly of great importance. Chloroform, whilst it has been a valuable servant, is a dangerous master, and death during its administration is not infrequent. It is the aim of the committee to ascertain the causes of death, to see how these may be obviated, and to discover some reliable data to guide the surgeon in the choice of cases in which chloroform or other anæsthetic may be given. They have no wish to introduce new anæsthetics, unless it be found that there are substances safer than chloroform, and more reliable and expeditious than ether, the administration of which would, even in inexperienced hands, reduce the dangers of anæsthesia nearly to zero.

It may be added that ethidene chloride has been administered to a number of patients in the Western Infirmary instead of chloroform, and, so far, with apparently satisfactory results. The time occupied in producing anesthesia was not much, if at all, greater than with chloroform, and the state of the pulse remained remarkably good throughout, while the general aspect and colour of the face were perfectly healthy, in this respect comparing favourably with the condition frequently

seen with chloroform.-J. G. M.

INDEX MEDICUS.—The growing importance attached to the subject of Indexes has given rise to the formation of an "Index Society," and the clever and very lively pamphlet recently issued by this Society, entitled, "What is an Index?" may be commended to those readers who have not yet realized the

importance of the subject.

Perhaps in no department of science or literature is the necessity of good indexes more apparent than in our own. Medical periodical literature has attained such enormous dimensions that one is almost appalled at its magnitude. learn, for example, from the advertisement of the proposed Index Medicus, that the first, or specimen number, to be issued immediately, will contain a list of 600 periodical publications. As the articles in these are to be indexed under the various subjects, it will be at once apparent that much labour will be saved in searching for references to the special subjects in which each person is interested. The Index Medicus will also contain careful descriptions of the various medical works received, with details as to size, price, illustrations, &c. The editors are, Dr. J. S. Billings and Dr. Robert Fletcher, of the Library of the Surgeon-General's Office, Washington, United States. Books, pamphlets, journals, transactions, &c., should be sent direct to the Librarian of the Surgeon-General's Office, Washington; or, to the care of Messrs. Trübner & Co., 57 Ludgate Hill, London. The publisher is Mr. F. Leypoldt, 37 Park Row, New York, as will be seen in our advertising pages. As a supplement or continuation of the subject catalogue of the medical library in Washington, promised by Dr. Billings, this Index Medicus will have great value. We see that the librarian expects to get authority this session from Congress to go on with the printing of this catalogue, which, when completed, will make ten volumes, royal 8vo, of 1000 pages each.

REVIEWS.

The Bearings of Chronic Disease of the Heart upon Pregnancy, Parturition, and Child-bed; with Papers on Puerperal Pleuro-pneumonia and Eclampsia. By Angus Macdonald, M.A., M.D., &c. London: J. & A. Churchill, 1878.

That cardiac disease more or less influences the course of pregnancy and parturition is a fact alluded to in most of the text-books on midwifery, but the statements are meagre and

general, and no attempt is made to differentiate the effects of the special cardiac lesions upon these conditions. On the Continent something has been done in the direction of supplying exact data on this subject; and Dr. Macdonald's work has a similar aim. The subject of investigation lies, as it were, on the border land of medicine and midwifery, and it may be due to this fact that it has not received the attention which it deserves, and it is to the author's credit that he has proved himself a thoroughly observant physician, as well as a specialist. The greater part of the book is built up on well recorded facts, furnished not only by his own experience, though this constitutes the greater part, but culled also from the writings of others; and, although it is necessarily very imperfect, it indicates a step in the right direction, and as such we bid it welcome.

It can hardly be wondered at, that a special risk should attend pregnancy in a subject with cardiac disease, considering what disturbances are apt to arise apart from such a complication. The changes in the composition of the blood itself, and the demands made upon the whole vascular apparatus by the development of the uterine and placental circulation, induce conditions which, in themselves, are not altogether without danger, and this risk is necessarily increased when any flaw exists in the organs on which strain is thrown. The effect of pregnancy upon the heart itself is a point which has been much debated. Does a temporary hypertrophy of the left side of the heart arise during the course of pregnancy? To this most French observers reply emphatically in the affirmative, while in Germany a much more guarded opinion has been expressed, some authorities denying it altogether. Macdonald inclines to side with the French school, and in this we are content to concur. We are bound to confess, however, that he makes too much of his small anatomical data on this subject. He has only three post-mortems; in the first, he himself admits that the heart did not appear hypertrophied; in the second it was undoubtedly so; while in the third "the heart was normal; but the left ventricular wall measured three quarters of an inch in thickness, and the whole heart weighed 9 ozs." It seems rather ridiculous, on such grounds, to say "that unbiassed anatomical experience supports very decidedly the French observers." Generalizations made on such grounds are not worth much, and have a tendency to weaken the reader's faith in an author's judgment.

But a certain amount of cardiac hypertrophy may be inferred from the condition of high tension which is almost invariably present in the systemic circulation during the pregnant state; 130 Reviews.

a tension, moreover, which augments as the pregnancy advances. This is a fact on which most authorities have been long agreed, and now that the sphygmograph has come so much into vogue, this increased tension can be ascertained to exist from the written characters of the pulse wave, as well as from the great pressure requisite to obliterate the pulse. The text of this book is illustrated by a number of sphygmograms, which are, more or less, characteristic of high tension; but apart from the great pressure which is indicated, they do not, on the whole, present, in the same striking manner, the characters of the pulse wave in high tension as Lorain's beautiful set of tracings in his work, Le Pouls (See Pouls des Femmes en Couches). increased tension appears to exist for some days, even after delivery; and it need hardly be matter for wonder that, under such conditions, the heart does hypertrophy slightly, and if any flaw should exist in the valvular apparatus, it is to be expected that more dangerous elements will come into play.

The fourth chapter is the most valuable part of the book. It contains records of thirty-one cases of cardiac disease, associated with pregnancy, and in many of these the course and issue of successive pregnancies are given. The lesions were chiefly mitral stenosis, mitral obstruction, and aortic regurgitation. It appears to be chiefly through lung complications that such patients die, and, on this account, mitral stenosis, if at all considerable, is the most dangerous, as it keeps the pulmonary circulation in a perpetual state of engorgement. Mitral insufficiency is not such a serious complication as the high state of tension in the pulmonary system is not continuous, and a greater degree of intermittent tension can be more easily met than a less degree of tension which is constant. During the delivery, of course, all the evil conditions are augmented by the strain. The whole of this chapter is worthy of the most thoughtful perusal; the cases are reported in detail, and the conclusions seem fair and reasonable. All we can do, however, is to present one or two practical deductions from a review of the whole matter. Chronic heart disease, especially if associated with distinct symptoms, should be looked upon as a barrier to marriage. If pregnancy occurs in such a condition, danger is less in the case of mitral insufficiency, pure and simple. possible causes likely to produce inflammatory action in the lungs should be avoided during the pregnancy, and especially in the later months. Premature labour should seldom or never be recommended, the only conditions which seem to warrant it being the presence of conditions which unduly distend the abdomen, and thus keep the diaphragm in a state

of continuous elevation. Chloroform, if carefully given during labour, is useful in almost all cases; and to prevent, as far as possible, the effects of down-bearing efforts, timely application

of the forceps is advocated.

There is a chapter appended on the essential pathology of puerperal eclampsia, having for its basis two cases. The author rejects the Traube-Rosenstein theory in such conditions—and we quite agree with him in this, for though many cases of acute Bright's disease, with much dropsy, may be explained on the theory of cedema of the brain, it hardly seems likely that the convulsions in puerperal and chronic renal cases, in which dropsy is not a prominent feature, can be attributed to this cause. Dr. Macdonald admits, on the ground of Kussmaul's experiments, that anæmia of the brain determines convulsions, and he thinks this anemia, in puerperal eclampsia, is due to irritation of the vaso-motor centres in the medulla oblongata, and argues that the good effects of chloral, in such cases, supports this theory, as it lowers vaso-motor action. We do not care to follow him into the details of his theory, which does not, to our thinking, settle the question any more than the others which have been propounded.

We wish the book, as it deserves, a large circulation.

A Practical Treatise on the Diseases of the Testis, and of the Spermatic Cord and Scrotum. By T. B. Curling, F.R.S., Consulting Surgeon to the London Hospital, &c. Fourth edition, revised and enlarged. London: J. & A. Churchill, 1878.

This work is very correctly named A Practical Treatise, and the sterling value of it as such has been long recognized. The present edition, which further embodies the experience of Mr. Curling, should be cordially welcomed by the profession.

We have one criticism to make on the work, but this will not, in the opinion of most of our readers, detract greatly from its value. It is stated in the preface that "since the publication of the last edition of this work, great advances have been made in morbid histology by Virchow, Rindfleisch, Klebs, and others." It is clear that the author has carefully perused the contributions of these writers, and the result has been the partial engrafting of a new pathology on the old. This is apparent in many places, and is brought out frequently in the modes of expression, which sometimes conform to the older, and sometimes to the more recent pathology. Thus, in the chapter on chronic orchitis it is stated that a product is formed

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between the tubules of a "fibrinous" character; that this use of the word is not accidental is proved by its recurrence in the next page. This is apparently some remains of an old pathology, which ascribed such great importance to fibrine in new formations. Yet, in immediate juxtaposition to this statement about the fibrinous character of the growth is a quotation from Rindfleisch to the effect that the process consists of a proliferation of the corpuscular elements of the connective tissue, followed by a fatty degeneration of the newly formed elements. There is a good deal of this sort of thing, rendering it obvious that, with the aid of Mr. M'Carthy, who is mentioned in the preface, there has been attempted, not very successfully, an intercalation of recent ideas on the older.

This is not a serious defect, but it could have been readily avoided by requesting a competent pathologist to make an

unsparing revision of all that concerns that subject.

So far as the really practical portion of the book is concerned, we have little but praise to award. Each subject is treated on thoroughly common sense principles, and even the most difficult are placed in a remarkably clear way before the reader. Among much that is important in a work such as this, it is difficult to select any particular part for fuller comment, but there are one or two subjects which we will venture to discuss in more detail, as being perhaps less known to the

generality of practitioners.

A very important section is devoted to the subject of "Imperfect Transition of the Testicle." There is, to begin with, a very interesting account of the means by which the testicle is conveyed from the abdomen to the scrotum. And here it may be remarked that the author objects to the use of the expression "descent" of the testicle, because, in the usual position of the fœtus in utero, the change in position takes place against gravitation, and is hence better named a transition. causes of detention, either in the abdomen or on the way from it, are next discussed, and then the condition of the retained testicle. It is this last part of the subject which offers some matters of special interest. Hunter believed that when the testicles remain through life in the belly, they are exceedingly imperfect, and incapable of performing their natural functions. Professor Owen makes some pretty severe strictures on Hunter for holding this view on what he regarded as an inconclusive analogy; and the present author, in the first and second editions of this work, expressed his adhesion to Owen's views. But it turns out that Hunter was right after all, and that "when the testicle has not passed into the scrotum, it is nearly

always small in size; generally it is healthy but undeveloped, that is to say, it has not undergone the enlargement and change in structure which take place at puberty. In some instances, especially when seated in the inguinal canal, it is withered and atrophied, having suffered fibrous, and more rarely fatty, degeneration, and exhibiting no trace of glandular structure." Even in cases where there is an apparent exception to this rule, it is only apparent. The author says that "several cases have come under my notice, and there are others well authenticated, of cryptorchics who, like Hunter's patient, had a masculine development, sexual desires, and powers of copulation. Nevertheless, recent investigations show that a retained testicle only imperfectly executes its functions, and is rarely capable of forming healthy fertile semen." It seems that the semen produced in these cases, though it may be in appearance normal, does not usually contain spermatozoa, and is therefore sterile.

The testicle retained in the abdomen is then generally in an imperfect state of development, and perhaps the imperfect development is really the cause of the retention. Apart, however, from imperfect development, the gland is usually healthy. It is different when the testicle is arrested in the inguinal canal. Here it is liable "to be compressed during any strong action of the abdominal muscles, and even in acute flexion of the thigh." "It is exposed to injury from blows which, being fixed, it is unable to elude." Hence the testicle here is more liable to inflammation, and is more frequently found withered and atrophied than it is when retained in the abdomen, where it is protected from injury. There is another danger which accrues to the retention of the testicle in the groin. The testicle projected into the inguinal canal carries a process of peritoneum with it, and this forms a pouch ready to serve as the beginning of a hernia. This danger is increased by the fact that the testicle is often adherent to the intestine or omentum. A protrusion, beginning thus, may pass beyond the testis, and form a a scrotal hernia, while the testicle is retained at the groin, or even in the abdomen. Again, it is to be remembered that inflammation of the testicle or epididymis is apt to spread to the tunica vaginalis. But in the case of the testicle retained in the groin, the sac which stands for tunica vaginalis is a direct pouch from the peritoneum, any inflammation is therefore liable to result in a general peritonitis.

From these observations it will be gathered that the treatment of retained testicle is of great importance. If the testicle has emerged from the abdomen, and the patient is

very young, "much may be done by gentle manipulation to promote its passage into the scrotum, and I have recommended traction with this view in favourable cases." Where such a procedure is not likely to be of use—and it can scarcely be expected to be effective if the patient is over two years of age—the treatment should be directed in view of the liability to injury and the formation of hernia. The testicle is safest in the abdomen, and an endeavour should be made to retain it there by means of a well fitting truss. When the organ "is subject to attacks of pain and inflammation which cannot be remedied by mechanical treatment, the best plan is to remove it."

Of the parts of the work devoted to hydrocele we have little to say; most of what is contained here has been incorporated into the standard works on surgery. In regard to hydroceles containing spermatozoa, the author holds that these are always cases of encysted hydrocele originating in the epididymis. He does not believe that they arise by dilatation of the tubes, but that they are "cysts developed in the connective tissue, between the ducts and their investing membrane." He believes that the presence of spermatozoa is due to the rupture of one of the tubes of the epididymis, and the escape of semen into the sac; and he asserts, in confirmation of this view, that cysts of this nature rarely contain spermatozoa when still of small size.

In regard to hematocele, in old cases of which the tunica vaginalis and its envelopes have often become much thickened and indurated, we make a single quotation. "The records of surgery furnish many cases in which castration has been performed in consequence of a mistaken diagnosis; I have known

three instances of the kind myself."

The section on chronic orchitis is one of great importance, especially as this, which is an eminently curable disease, is apt to be mistaken for tubercular disease, which is practically incurable. The testicle undergoes a chronic enlargement, without much pain, till the organ is at least twice its natural size. The enlargement is so slow, and the inconvenience so slight, that the gland often attains a considerable size before the patient seriously attends to it. This enlargement is due to a chronic inflammation, the consequences of which seem to be an increase of the interstitial connective tissue, together with the formation of a yellow cheesy material, which latter seems to be formed in part from the degenerate connective tissue growth, and in part from the tubules. It is here to be remarked that this disease is, in most cases, syphilitic—some

assert that it is so in every case—and the process which occurs is in many respects similar to that of the formation of the syphilitic gumma. After a time the skin, at some part of the scrotum, becomes thin and prominent, and becoming red and inflamed, it by and bye ulcerates. In that case the tissue of the testicle protrudes through the ulcer, and a fungous protrusion is formed, which is so apt to be mistaken for a malignant growth. As, however, the protrusion consists simply of the tissue of the testicle, which gets covered with granulations, and as the protruding tissue may even recover its function if duly and timeously replaced, it warrants the name of the benign fungus. In its earlier stages this disease is peculiarly liable to be mistaken for tubercular disease, and we shall now refer to the means of diagnosis between these two. It is by no means uncommon, even for authors, to confound them together, "being misled by the indolent nature of the swelling and the yellow appearance of the morbid material in chronic orchitis. The tubercular differs, however, from the chronic inflammatory swelling in being more indolent; in making even slower progress, and being attended with still less pain and inconvenience; in the irregular surface and smaller size of the swelling; and, when the epididymis is attacked, in the globus major being the part principally affected. instead of the lower part, which is usually first enlarged in chronic inflammation. The diagnosis, however, may be extremely difficult." The diagnosis is a matter of very great consequence, because the treatment of the two affections is so very different. Chronic orchitis, being mostly syphilitic, is commonly treated with mercury and iodide of potassium, which would clearly do harm in a tubercular case.

Our notice of this work has already extended to considerable dimensions, and we can only further refer to the sections on Impotency, Sterility, and Spermatorrheea as presenting a great mass of interesting and practical material. Altogether the work is one to be highly recommended to the practitioner, who is too often somewhat at sea in regard to the diseases of the testicle.

Aids to Surgery. By George Brown, M.R.C.S., L.S.A. Part I. London: Bailliere, Tindall, & Cox, 1878.

This "wee bookie" is a reprint from the Student's Journal; ushered into the world with the remark, by the author, that whatever the verdict of the critic may be, his hope is that this little work will be useful to those who are anxious to acquire

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knowledge. We are of this category, and we set ourselves to acquire some knowledge from the book before us. In this we were not very successful; but, on the other hand, there are no glaring errors to be detected. It is, in short, a very brief summary of facts about the more common surgical diseases, condensed from the ordinary manuals. In such an effort much that is essential must be omitted; and while, no doubt, such a minute volume may be agreeable to a lazy or incapable student, it will inevitably fall short of the wants of the earnest or intelligent undergraduate. For the practitioner it can do no more than recal to him the most elementary and familiar rudiments in connection with diseases which he has frequently under treatment, and on that account it will not, we fear, be very highly appreciated by him.

The Surgeon's Handbook on the Treatment of the Wounded in War. A Prize Essay. By Dr. Fredrich Esmarch, Professor of Surgery to the University of Kiel; Surgeon to the University Hospital, Kiel; Surgeon-General to the Prussian Army. Translated by H. H. Clutton, B.A., Camb., F.R.C.S. London: Sampson, Low, Marston, Searle, & Rimmington, 1878.

A NUMBER of works on military surgery have appeared of late; some aiming at being complete treatises, entering fully into minutize and detail, while others aim at being mere aids to the memory—handbooks to be consulted in emergencies. The work of Surgeon-Major Longmore may be regarded as typical of the former, while the volume at present under review is characteristic of the latter. Esmarch believes that the memory is assisted and refreshed more by illustration than by words; and more especially, when time is pressing, as the eye can take in at a glance from an illustration what would require a much longer time to read. That the author has fully realized this, is evident from the fact that, in a volume of 306 pages, there are 536 woodcuts, and 30 coloured plates; and it is further shown, when we state that, the letterpress is so trite and terse that it leaves little room for criticism. The plates and woodcuts, which fill more than half of the volume, are very clear and distinct, and are well chosen, as they convey to the mind the exact idea meant to be impressed. The work aims at aiding the younger military surgeons, as well as the attendants, and for these latter, special attention has been paid to impromptu dressings. It serves as a guide to the members of the Red Cross Society in procuring and getting ready the

dressings, appliances, and instruments, as they are principally used in war; and also assists the surgeon, when compelled to erect an hospital in a village, in making clear to the workmen his wishes respecting the manufacture of appliances for the treatment of the wounded. In all these points the book is well suited. The translation has been well performed by Mr. Clutton.

The Address on Surgery delivered before the British Medical Association assembled at Bath, 8th August, 1878. By C. G. Wheelhouse, F.R.C.S. Leeds, 1878.

This tastefully got up pamphlet, on substantial toned paper, and with large type and copious margin, gives, in a readable form, the experience of the lifetime of the distinguished author. Such a record cannot but be interesting, and it is rendered still more so by the unaffected tone which pervades the whole address. The author touches upon all the leading advances which have been made in the last quarter of a century, evincing, as he does so, an openness to conviction which appears to be the result of careful testing of each new suggestion as it is made.

Mr. Wheelhouse is an ardent follower of Lister, but he dissents from the use of carbolised cat-gut ligatures, on the score of their proneness to soften too readily, and burst or slip, and their consequent insecurity. In his practice, the silk ligature, with one end left long, has given the best results.

For drainage, he speaks highly of the plan introduced by Mr. M'Gill—namely, "a long tube inserted at one end into the wound, and at the other into a bottle in which an antiseptic fluid has been placed." And he concludes his remarks on the dressing of wounds by saying that, "in a carefully planned, well drained, and antiseptically dressed wound, we have the perfection of the surgery of the present day."

Not less valuable, from a practical standpoint, is the opinion on the use of the trephine, which he uses in all cases of compound depressed fractures, where he can be sure that both

tables are involved, symptoms or no symptoms.

The address is full of sound advice, which is suggestive and instructive, even where it may not be unhesitatingly accepted by the reader, for it deals with the facts of nature, and not with uncertain theories. We are sure that it will be read with pleasure and profit.

No. 2. Vol. XI.

A Manual of Necropsy; or, A Guide to the Performance of Post-mortem Examinations, with Notes on the Morbid Appearances, &c. By A. H. Newth, M.D. London: Smith, Elder & Co., 1878.

The unfortunate word which appears in the title of this book is explained by the author to be derived from $\nu\epsilon\kappa\rho\sigma$, death; and $\sigma\kappa\sigma\pi\epsilon\nu$, to examine; its meaning is rather an examination of death than an examination of a dead body. It is not, therefore, either apropos or elegant; nor is there any good reason for its use in the place of the generally received expres-

sion, post-mortem examination.

We cannot say that we endorse the recommendations contained in this work. Take, for example, the method of opening the body, "by an incision from the symphysis pubis to the suprasternal notch," evidently the person opening the body, unless left handed, must stand on the left side of the corpse. Then, as to the chest, cut the costal cartilages "from within outwards, so as not to injure the contents of the chest." We suspect that Dr. Newth must be joking, for no surer means could be taken to puncture the thoracic viscera than the plan here recommended.

In the chapter on the urinary apparatus we read, "The cortical substance is often studded with white granulations, surrounded with a brownish-red border; they are about the size of a pin's head, in acute simple nephritis; these contain pus; in traumatic nephritis they contain plastic lymph, or decolorised fibrine. In some cases pus forms between the pyramids. Disseminated crystals of urate of soda are often met with." The less we say of this sort of thing the better, but we adduce it as a sample of the pathology in this work.

Take, again, the instructions as to instruments required for post-mortem examination. Dr. Newth says, very truly, "The fewer instruments the better, when the necroscopist (sie!) has to carry them all with him;" and then he gives a long list of things, including, 13—"An iron ring, with three screws to fasten to the head to guide the saw, and with a handle to steady the head; and, 14—several blocks of wood to support the head; in the mortuary, however, a head rest should be attached to the table, with adjustable screw slide." The pathologist (or necroscopist, as Dr. Newth calls him) should have a cart to carry his tools, if he can't get along without these articles.

We regret to say that, from a practical and scientific standpoint alike, we are unable to commend this book to our

readers.

Transactions of the New York Pathological Society. Edited by John C. Peters, M.D. Vol. II. New York, 1877.

In the preface to this volume the editor appeals for support to all interested in the more recondite branches of medical science. The expense of publishing the two first volumes of the Transactions has fallen with chilling effect upon the purse of the Society itself, and the completion of the publication of the Transactions is delayed by the want of funds. It cannot be said that the Society has been in too great a hurry to publish, for although instituted in 1844, and having had before it over 10,000 cases, the first volume of Transactions was only put out in 1876.

The present volume, therefore, like the first one, contains the cream of the many rare cases which have come up during that time; and it is published in a style which does credit to the editor, and justice to the valuable material. We welcome this volume as a really important addition to our reference literature, and we may also add that the charming arrangement and finish of the articles renders it pleasant and instructive reading even for the spare half-hours of the practitioner.

The cases are arranged in groups, a plan which permits of easy reference, and facilitates the consideration of the varieties in similar diseases. For example, in the present volume there is a series of five cases of perforation of the bowel into the bladder, from a study of which a vivid idea of the leading peculiarities in such cases is obtained. And the book is full of

such series.

We wish the work every success.

Clinical Report of 752 Cases of Forceps Delivery in Hospital Practice. By George Johnston, M.D., F.Q.K.C.P., F.R.G.S., ex-Master of the Rotunda Lying-in Hospital, Dublin. Dublin Journal of Medical Science, January, 1879.

Any paper on the use of the forceps, written by an honest and experienced practitioner, is sure to command the attention of the obstetrician, how much more the practice and opinions of an ex-master of the Rotunda, distinguished alike for his professional ability and his integrity of character. Dr. Kidd, an able confrère, considers it the most important paper he has ever heard read in the Society, tending, as it does, to revolutionize the practice of midwifery. "There was no member of the Society," he said, "who was not attracted to approve of the vractice recommended by Dr. Johnston by the respect all 140 Reviews.

entertain for him, both personally and professionally, as well as by the care, clearness, and candour with which he states the results he has obtained, and the earnestness and zeal with which he advocates his principles," and this opinion doubtless will find a ready response in the hearts of all his old pupils, scattered as they are over the whole world. And this is no idle compliment. It has the most direct bearing upon the value of the paper, for the statistics, viewed entirely by themselves, are not more conclusive in this instance than they usually are. Hospital practice obviously cannot be compared with that in private; different hospitals derive their patients from very varied social surroundings, and even the same hospital cannot remain under the same conditions at different periods of its history. We shall not, therefore, refer in detail to the statistics given, but notice only the more general results of Dr. Johnston's practice. During the seven years of his mastership, he employed the forceps in 752 cases, out of 7,862 delivered, being an average of 1 in 101, 554 of which were primiparae and 198 pluriparae. Of the 554 primiparae, 506 recovered and 48 died, or 1 in 113. Of the 198 pluripara, 188 recovered and 10 died, or 1 in 194. The higher death-rate amongst primiparæ, Dr. Johnston has always considered due to the fact that a greater proportion of these are unmarried, and that mental anxiety and worry determines the greater mortality. Of 335 male children 316 were born alive, and 19 were dead, 4 of these having evidently been so for some days. These 4 excluded gives an average of 1 in 221. female children, 200 lived and 14 died, or 1 in 15,3.

An average of one forceps case in 101 will generally be considered safe practice. If we can trust statistics they show "that a resort to the application of forceps, even as frequent as 1 in 10, diminishes the dangers of parturition to both mother and child." (Edis.) But when one remembers that, as Dr. West has pointed out, Dr. Collins of Dublin applied the forceps once in 600 labours, and Professor Stein of Marburg once in 51, we incline, as already stated, to be guided by our opinion of the operator, rather than by any statistics, however Now, no one will venture to say of the late master of the Rotunda that he was predisposed to the employment of the forceps. We would rather conclude, from personal observations, that he was unwilling to use them in the earlier period, at least, of his mastership, and this, in one possessed of his rare manipulative power, surely constitutes him a safe operator and a trustworthy guide to those who would learn well.

In apparent contrast to this is the next point raised, where

he advocates, in particular cases, delivery by the forceps before the os uteri is fully dilated. "In speaking of this proceeding, I consider it necessary," he says, "in the first place, to state that, although in such cases the os uteri was dilated only to the extent mentioned, it, nevertheless, must have been dilutable -i.e., capable of further expansion. Should it be rigid, the usual means for relaxing it must be adopted previous to attempting to operate." He then cautions the practitioner that the operation is not without danger in unskilful hands, but if performed by those who have the necessary delicacy of touch, and sufficient experience, "it not only in a great measure secures the safety of the mother, but tends materially to the preservation of the life of the child. The former, by obviating the danger produced by prolonged pressure of the fætal head on the maternal soft parts, and all its evil consequences, and the latter by preventing interference with the placental circulation endangering the life of the child, particularly in cases of early rupture of the membranes." In place of speaking of the os as the size of a sixpence, shilling, &c., he takes 4 inches as the diameter of the fully dilated os, and divides it into five parts, and gives the results of his practice in three tables, where the os was respectively $\frac{2}{5}$, $\frac{3}{5}$, and $\frac{4}{5}$ dilated. The position here taken is admittedly as all important as it is novel. As Dr. M'Clintock cautiously said, "to Dr. Johnston indisputably belonged the credit of having clearly laid down and taught the practice in question, be it good or bad." It will probably be pretty generally admitted that in Dr. Johnston's hands, and in such as his, the practice is a safe one, but there can be little doubt that, in spite of his words of warning, hundreds will argue that if Dr. Johnston can do it, so can they, and who will conveniently forget his caution never to do it when the os is rigid, or to save their own time.

He raises incidentally the question of the use of straight or double curved forceps, but does not discuss it. "The instrument we at first employed," he says, "was the straight form, both short and long, according as the head was low down or high in the pelvis; but on very many occasions, particularly in the latter instances, finding them fail, as they slipped from off the head when it was above the brim, or it was at all impacted, we eventually had recourse to Barnes' double curved forceps, which we have ever since found most satisfactory, being equally easy of introduction, and when applied grasping the feetal head so firmly that we hardly ever failed to deliver with them." He thus simply describes his conversion, and leaves others to their own belief. But it will not pass the less unnoticed.

There is no point Dr. Johnston takes a greater pride in teaching than that to which he next refers—viz., that the forceps need never injure the patient, that it need not be responsible for the slightest laceration of the perineum; and this is effected by invariably removing both blades just as the head is about to be born, when the occiput is brought under the arch of the pubis, and the forehead bulges the perineum. If laceration should occur the forceps cannot be blamed. We have never seen this done except in Dublin, or by those who have learned the lesson there, and we are glad to have the opportunity of drawing attention to a method which we

would wish were better known.

To the discussion which followed we will not refer further than to say that all united in expressing their respect for the speaker, and their confidence in what he had said, although all were not prepared absolutely to follow the practice laid down. Dr. Kidd, with his well known ability, raised a most formidable breastwork of opposing statistics to show "that it is the better and safer mode of practice, for both mothers and children, when delay occurs in the first stage, unless there be special circumstances demanding it, to avoid the use of instruments, and instead to rely on milder means for conducting labour to a safe termination." But through this Dr. Johnston rides triumphantly, and undismayed repeats the challenge with which he closed his report:—"That it is amply proved that the practice is not alone safe, but is also a great preservative of the lives of both mothers and children."—J. W. A.

REPORTS OF HOSPITAL AND PRIVATE PRACTICE.

WESTERN INFIRMARY.

Under the Supervision of Dr. W. G. DUN.

From Dr. George Buchanan's Wards.

—The patient, a young girl of 11 years, was admitted on 28th October, 1878, complaining of stiffness in the neek, and of acute pain on any movement of the head. It was observed that,

when she wanted to look about her, she required to move her whole body, the head being kept quite fixed and motionless; and that in rising from the recumbent to the erect posture, she carefully held her head with both hands, so as to prevent altogether any movement at the atlanto-occipital articulation. She stated that the stiffness in the neck began in March last, and shortly afterwards movement of the head became painful, the pain gradually increasing in intensity. No cause is assigned for the complaint.

The tissues at the back of the neck seem hardened and stiff, and the spine slightly irritable, as far down as the fifth dorsal vertebra, pressure on the spines of the vertebrae causing pain. There is also a slight lateral curvature of the lower cervical vertebrae to the right side. Over the lower ribs, on the right side, there is a strumous looking cicatrix, but there

are no marks on the neck.

On 3rd December Dr. Buchanan applied the actual cautery at a spot on each side of the vertebral column, immediately below the occiput; marked benefit ensued; in the course of forty-eight hours all pain was gone; the patient could move the head in every direction, and percussion of the vertex failed to elicit pain. This favourable state continues, the patient still carries her head rather stiffly, but this is perhaps to be ascribed to the sores from the cautery, which continue open.

TUMOUR OF ANTRUM-EXCISION OF SUPERIOR MAXILLARY BONE—RECOVERY.—W. W., aged 54, was admitted on 28th November, with an evident swelling of the left cheek. tumour felt hard, and it appeared as if the wall of the antrum were bulged forwards by something pressing from behind. The history is, that about three years ago a reddish blush was noticed over the cheek, and that at that time, or shortly after, a polypus was removed from the left nostril. Since then four or five mucous polypi have been removed from the same nostril. Until three months ago there had been a more or less continuous discharge of something like "bloody water" from the The left nostril was much obstructed. The upper molars on the left side had all been removed, and incisions made into the gums with no good results. Patient suffers severe pain at times; the pain has a certain periodic tendency, being most violent at night. About eight days before admission the pain was most excruciating. On admission, there was slight redness on the surface of the cheek, and the temperature was rather higher than that of the rest of the body. Pressure on the tumour caused pain, but no crackling was felt.

is no history of malignant disease in the family; the general health of the patient is good. The sight of the left eye is impaired by a cataract, which began to form before the growth in the antrum was observed.

On 7th December Dr. Buchanan removed the upper jaw, with the included tumour. The case progressed remarkably well, there was very little bad smell from the mouth, the patient using a wash of chlorate of potash. The stitches were removed about a fortnight after the operation, and the patient was dismissed on 27th December. The line of incision, at this date, could only be seen on very close inspection, and the depression of the cheek was so slight that one could scarcely imagine the upper jaw had been removed. The tumour occupied the whole cavity of the antrum, and was beginning to grow downwards into the mouth, at the posterior part of the palate, and extended back into the zygomatic fossa.

LITHOTRITY—RECOVERY.—J. P., aged 47, was admitted on 2nd December, complaining of difficult, painful, and frequent micturition. The pain which formerly was felt at the point of the penis was most frequently felt latterly in the perinæum. and usually came on after micturition. Blood had been occasionally noticed in the urine, with which it was intimately mixed. Patient could not retain his urine for more than two hours at a time. On sounding with a smooth lithotrite, a stone was felt about the size of a filbert, and freely movable in the bladder. On 13th December Dr. Buchanan performed lithotrity; the stone was broken without difficulty. Poultices were ordered to be applied over the hypogastrium, and patient to have a morphia suppository at night. The crushing was repeated on three subsequent occasions—namely, on 16th, 18th, and 23rd December, the pieces crushed on these dates being progressively smaller. On 3rd January the bladder was well washed out with tepid water; no fragments of stone came away, and on passing the lithotrite no remains of the calculus could be felt.

The stone, which was very dense and hard, was composed of mixed urates and phosphates; the fragments and sand recovered, weighed 25 grains, but most of it was lost owing to an assistant nurse inadvertently emptying the vessel which contained the results of the crushing on two occasions. Except for the first forty-eight hours after the first operation, the patient was not confined to bed, and suffered no inconvenience during the treatment.

FROM DR. M'CALL ANDERSON'S WARDS.

SICK HEADACHE—SATISFACTORY RESULTS OF TREATMENT WITH GUARANA.—J. W., aged 30, admitted 2nd December, 1878, suffering from violent headaches, which began five years ago; at first they varied much in intensity, sometimes being comparatively slight. The pain was distinctly limited to a spot above the left orbit. Six months ago the pains began to be very much more severe and frequent, lasting for twelve hours or more at a time, accompanied by nausea which, as the headache came to a crisis, culminated in vomiting, from which, however, he gained no relief. The only thing which seemed to relieve him was perfect rest. For the last three months, prior to admission, he had been treated with iodide of potassium, which stopped the vomiting, and somewhat mitigated the pain. In youth he occasionally, with long intervals, had a slight diffused sick headache, but never severe, and not confined to one spot above the left orbit, as is the case now. Since the age of 17 he has been almost wholly free from headache. About ten or eleven years ago he contracted syphilis. and suffered from very severe constitutional symptoms, eruption, sore throat, &c. Shortly after, he had an attack of gonorrhea. After reading for some time his power of mental concentration gradually leaves him. His memory is failing somewhat. The left pupil is dilated in comparison with the right; visual power, hearing, taste, and smell are normal. He has no affection of speech. He is troubled with flatulence, pain, and a feeling of heaviness over the epigastrium.

On 5th December, he was put upon guarana 5i. three times daily. Great relief was experienced; the headaches became less frequent, and their severity greatly diminished. On 23rd December, the regular administration of the guarana was stopped, and patient instructed to take it only when headache threatened. Since this date there has been only one severe attack, and this appears to have been due to the fact that he

took no powder, the supply being exhausted.

AGUE—ARREST OF ATTACKS BY INHALATION OF NITRITE OF AMYL.—G. R., aged 19, admitted 16th December, 1878, suffering from an attack of acute desquamative nephritis, regarding which there is nothing to note of special interest. The interesting feature in this case is the action of nitrite of amyl in arresting the onset of several attacks of ague. Patient was born in India, where he contracted ague, and since coming to this country, in 1875, he has had repeated attacks of a modified

character, for which he was in the habit of taking quinine. There is considerable enlargement of the liver, and, to a less degree, of the spleen. Since admission to the infirmary he has had several attacks, and in the case of the last four, the administration of five drops of nitrite of amyl, by inhalation, immediately cut them short.

ACUTE DESQUAMATIVE NEPHRITIS—TREATMENT BY ELATERIUM AND TROUSSEAU'S DIURETIC WINE—RECOVERY.—J. C., aged 5, was admitted 3rd October, 1878, in an intensely dropsical condition, the whole subcutaneous tissue being so much distended that there was no pitting on pressure; owing to the thickness of the abdominal parietes, the existence of ascites could not be determined. The urine was scanty, and loaded with albumen, and granular and hyaline tube casts. Under the use of ordinary diuretics and purgatives considerable improvement took place in the condition of the patient, but the dropsy began again to increase, and became so excessive, that on 10th November, the legs and scrotum were tapped, Southey's trocar and canula being used. The quantity of urine was greatly diminished, only 4 oz. being passed in twenty-four hours. The previous treatment proving now ineffectual, Dr. Anderson ordered onesixteenth of a grain of elaterium to be given in pill, to be repeated every second day if necessary; patient to have also half a teaspoonful of Trousseau's diuretic wine thrice daily. very rapid improvement took place in the condition of the patient, the urine increased in quantity, and the dropsy quickly subsided. On 4th January he was put upon cod liver oil, all other treatment being discontinued; his condition continues quite satisfactory, and the urine at this date, 14th January, is perfectly normal, not showing a trace of albumen.

FROM DR. GAIRDNER'S WARDS.

JERKING MOVEMENTS OF THE HEAD AND GIDDINESS FOLLOWING A BLOW ON OCCIPUT—IMPROVEMENT.—M. G., aged 20, admitted 25th November, complains of giddiness and irregular movements of the head, which she is unable to control. About a month ago she received a blow on her head, on the occiput, while at work, which was very soon followed by the shaking of the head. At the age of 6 she fell and wounded the scalp a little above the occipital protuberance; she was led to understand that at the time it was a serious wound. The giddiness has troubled her from the age of 12, and has prevented her from retaining a situation for any length of time. The feeling

she has all along experienced in connection with the giddiness was as if she was intoxicated, and everything going round about her. She could not steady herself on her feet, and very often would have fallen backwards, unless she had grasped at something. This sensation of giddiness was generally more intense during the forenoon, and just before dinner-time, although she felt it the whole day. When lying down she is free from the giddiness. The head is turned round in the direction of the right shoulder, and remains in that position with a perpetual jerking movement from left to right; and on attempting to bring it round pain is felt at the back of the neck. In order to look straight in front of her she has to support her head with her hands, and when this assistance is withdrawn the head at once reverts to its former position. The head is quite free from any movement when the patient lies in bed. She has often felt a quivering about the right eyelid, and sometimes could not see with the right eye. The pupils of both eyes are slightly dilated, but nothing further of an abnormal nature is noticed. Her lips, she says, occasionally quiver, and at times she has felt the left arm shake. In the morning she feels her legs weak and trembling, and she has a tendency to fall backwards.

The patient does not look very robust; her hair, of a light brown colour originally, is largely mixed with gray. Three years ago she had an attack of acute rheumatism. The most striking features in this case are the peculiar jerking movements of the head, and the twisting of the head to the right side, together with the fact that the jerking ceases on the

patient assuming the recumbent position.

Since admission there has been a certain degree of improvement in the condition of the patient. The jerking movements have ceased almost entirely, only occurring occasionally. The head is still twisted toward the right shoulder, but not so much as on admission; when she reads, however, or looks fixedly at any object, it becomes twisted as much as ever. The giddiness still continues, and patient suffers a good deal from headache. The treatment has been by iodide and bromide of potassium; the former in 10 gr., and the latter in 20 gr. doses. Arsenic was given for a short time, but not adequately, and Dr. Gairdner proposes now to give it again.

PARAPLEGIA, WITH GREAT MUSCULAR RIGIDITY (ERB'S SPASTIC PARALYSIS?)—IMPROVEMENT.—D. M., aged 10, admitted 6th August, 1878, has suffered from loss of power in the lower limbs since the preceding January. The boy has evidently

a very decided strumous taint, as is evidenced by cicatrices and scrofulous sores on various parts of the body, especially about the jaw and right elbow joint; the latter has been ex-The paralysis seems to have been developed rather suddenly, patient having staggered and fallen while on the street; he continued to move about in an imperfect manner for a few days, and then lost almost all control over the movements of his legs in walking. Sensation seems to have been deficient in the legs at an early period of the disease, to the extent that he could endure to be beaten with a rod or pricked with a pin without any evidence of pain being thereby elicited. He had never any pains in the limbs, and so far as can be got from him, there has never been any sensation at all similar to formication or tingling. The upper limbs are entirely free from anything abnormal. On admission, the patient was totally unable to stand or even to walk, but, at the same time, he could move, especially the right leg, and to a less extent the left, pretty freely in bed. With this paralysis there was a very marked degree of muscular rigidity, the sural muscles were contracted, and the toes pointed downwards; the muscles of the hip and knee were also rigid. Patient sometimes lay with his legs straight, and then there was resistance to flexion at the knee, sometimes he lay with them flexed, and in that case extension was resisted. There was considerable dulling of sensation, he allowed pricking with a needle and pinching without the least wincing. This dulling of sensation involved the trunk to about the level of the nipples. Reflex action was variable. At times tickling of the soles, or pricking, produced no effect, at other times a very distinct contraction. Tendon reflex movements were very marked. A symptom mentioned by Erb was very distinctly observed; when either foot was lifted up by pressure against the ball of the foot, patient being in a sitting posture with the legs hanging down, there was frequently, but not invariably, a remarkable tremor of the limb, due, apparently to sudden contraction of the sural muscles acting on the tendo Achillis, and possibly also of the extensors.

His urine was almost constantly passed, more or less, in bed; and it was quite usual, on his being lifted, for him to let it pass away on the floor. In fact, it required attention to keep

him moderately clean and free from bed sores.

The distinctly strumous condition of the patient seemed the guide to treatment, in this case; accordingly, he was put on cod liver oil and compound syrup of the phosphates, and with exceedingly good results. His condition slowly improved,

the sensibility in the affected parts gradually returned, he regained, to a great extent, the power of his legs, was able to move about quite freely, and had so far control of himself as to be able to carry about one of the ward chairs. There remained, however, a slight dragging of the right leg. The rigidity of the muscles was gone, and the tremor above referred to could not be observed.

In addition to the above case, another very striking case of what might well be called "Spastic Paralysis" was admitted to Ward I. There was no improvement under treatment. With many points of resemblance to Erb's paralysis, however, both these cases differ from his description in the presence of anæsthesia to a very notable degree, and also in the affection of the sphincters as above indicated, and the tendency, in some degree, to bed sores, all of which are said to be absent as symptoms in Erb's disease. Moreover, the history of the case last alluded to, points with great probability to spinal meningitis as a complication at least, if not as the original affection.

PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS OF DUCHENNE. —This case was shown by Dr. Gairdner, at the meeting of the Pathological and Clinical Society, on 14th January, and as it is one of comparative rarity, a brief note is made here, so that readers of the Journal, who may be interested in it, may have an opportunity of seeing it.-J. M'D., aged 9, is at present a patient in Ward IX. The case is a perfectly typical one of the pseudo-hypertrophic muscular paralysis of Duchenne, and shows the characteristic gait of this disease. It is possibly, but not certainly connected with a fall at three years of age; the apparent symptoms began after the fall, very insidiously, and quite painlessly. The calves of both legs are notably enlarged. The gait of the patient is somewhat "rolling;" he puts his foot down flat on the ground, turning the toes inwards. The abdomen is thrown forwards and the shoulders back, and there is great anterior convexity of the spine in the dorso-lumbar region. The buttocks also are prominent. This disposition of the body is wholly of a compensatory character, allowing the patient to balance himself in walking, and entirely disappearing when he lies in bed. He was unable to mount a chair, and when laid upon his back rose only with the greatest difficulty. The general health of the boy is good.

GLASGOW ROYAL INFIRMARY.

UNDER THE SUPERVISION OF DR. J. WALLACE ANDERSON.

FROM DR. WOOD SMITH'S WARDS.

TUBERCULAR MENINGITIS-TUBERCULAR TUMOURS IN CERE-Bellum, &c.—H. M'D., act. 9, re-admitted 8th November, 1878. Had previously been under Dr. Macewen's care, who amputated above knee for strumous disease of the joint. On re-admission complained of severe headache, and continually vomited his food. Bowels were very confined, a table-spoonful of castor oil quite failing to move them. An enema was then given, after which they continued regular. Four days after admission the vomiting quite ceased. On the 16th November, a decided change took place. It is noted for the first time at the morning visit, that he lies in a semi-conscious state, continually twisting the penis with his right hand, and pulling his hair. His face is a little flushed, the left arm somewhat rigid, and urine is passed involuntarily. He lies on his back, and abdomen is flattened and retracted. When sleeping, his eyelids are only partially closed, and his left pupil is slightly dilated, with converging squint. The temperature in axilla has fallen to 96°. Pulse about 60, and very feeble. There is no loss of sensation in any part, but his movements are mainly confined to the right side of body. Could not obtain any of his urine for examination. November 18th, there is great increase in the flushing of face, and it is bathed in perspiration. The tremor of right side is somewhat increased this morning, and there is still the continual twisting of the penis with right hand, and pulling at his hair. There is slight irregularity of the pupils—the left a little more dilated than the right. His head is held to right side, and he still lies on his back, in a semi-conscious state. Passes urine involuntarily, and bowels very costive. On the morning of the 19th November, the temperature rose to about 103°, pulse very rapid, and face extremely flushed. He gradually became comatose, and died in the evening. Dr. Foulis made a post-mortem examination, and reports-Body rather emaciated. On opening the head the surface of the convolutions is seen to be very much flattened, and of a dry, deeply injected, glazed appearance. The larger veins are all full of dark blood. The base of the brain is the seat of inflammation, the optic chiasma being filled up with yellow-greenish lymph and serum, extending into the fissure of Sylvius and

back along the crura cerebri. On close examination, very minute miliary tubercles can be seen on the pia mater, in the fissure of Sylvius. On the left side of the cerebellum are small yellow tubercles, some as large as a marble, and others smaller; these occupy the gray matter of the cerebellum, chiefly on the surface. They have a greenish-yellow appearance on section, and are surrounded by a reddish-gray semi-translucent lineapparently the growing edge. Both lateral ventricles are considerably dilated with a slightly turbid serum. The right corpus striatum and its vicinity is the seat of capillary hæmorrhage in patches. There is also a small patch of capillary hæmorrhage in the white matter of the left hemisphere, under the motor tract. The brain weighs 393 oz., and its substance generally is soft and moist. The other organs present nothing very striking. The left leg has been amputated just above the knee. There is a small abscess at end of stump, communicating with bare bone. Nerve ends in stump are bulbous and not adherent. End of bone covered with rough subperiosteal deposit; medulla deeply injected.

From Dr. Dunlop's Wards.

Reported by Mr. Eames, Clinical Assistant.

CASE OF COMA FROM ALCOHOL AND EXTRAVASATION OF BLOOD UPON BRAIN RESULT OF VIOLENCE-NO FRACTURE-DEATH ON THE 13TH DAY.—J. M., aged 50 years, was admitted into Dr. Dunlop's female ward on the morning of the 6th November, 1878. She was quite unconscious when admitted, and could not be roused. She had a strong odour of alcohol. From the policemen, who brought her to the hospital, it was learned that, at an early hour of the previous evening she had been seen about the streets under the influence of drink, and at a later hour she was found lying at the foot of a stair in a close. She was conveyed to the district police office, and as she was known to be in the practice of becoming frequently intoxicated, and further, as there was a strong odour of alcohol emitted with her breath, she was placed in a cell, and carefully looked after. As she did not recover consciousness after an interval of several hours she was removed to the hospital. On admission she was observed to have two slight bruises on the left temporal region, and also an abrasion upon the nose. At the hour of admission she was still unconscious, with small and equally contracted pupils. Her breath was distinctly alcoholic in odour, and her pulse was small and slow. At the visit hour she was still unconscious. Her pupils, though contracted, were observed to dilate as she was being roused, and when the rousing process ceased they rapidly resumed their contracted condition. She was again seen in the afternoon, and as sufficient time had elapsed for the effects of alcohol to have passed off, and she was still unconscious, it was considered that there was, probably, some head injury along with the intoxication. On the following day, the 7th, after having had cold applied to her head, and been well purged, she became partially conscious, and continued in that condition for several days. While in this semi-conscious state she stated that she had been criminally assaulted, and thrown down at the foot of the stair. but she could not state by whom. On the 16th she gradually became unconscious, and remained in that condition till the morning of the 18th, when she died, 13 days after admission. During these two days her left side became paralyzed, and her pupils became irregular—sometimes contracted, sometimes dilated, always irregular, and not sensitive to light.

On post-mortem examination there was found a large clot of blood spreading over the right hemisphere, under the dura mater. There was no fracture of the skull, or any evidence of injury on the right side; but in the left temporal fossa, and extending forwards to the left frontal eminence, there was a considerable quantity of extravasated blood. In addition to the blood there was compression of the right hemisphere, and there had been inflammatory effusion taking place upon the

dura mater.

It was remarked of this case that it was, from the first, one of coma from extravasation of blood, probably with the addition of some symptoms of alcoholic poisoning. These latter symptoms must have soon passed off, leaving the coma of compression. The relapse into complete unconsciousness, after being so conscious for several days as to be able to tell her name and answer questions as to her state, is to be explained by the fact that, in consequence of the presence of the large clot, and of the compression of the brain, inflammatory changes had been set up, and effusion had taken place, giving rise to further compression which proved fatal.

There was no evidence of disease of blood-vessels, or of the heart. The bleeding had taken place on the right side of the brain, immediately opposite the point where the injuries had been inflicted on the left side, and the clot was not between the cranium and dura mater, but was spread over the greater portion of the right hemisphere, and could not have been

reached by trephining.

FROM DR. MORTON'S WARDS.

EXTREME CONTRACTION OF FLEXORS OF FOREARM—PRESSURE ON MEDIAN NERVE FROM DEFORMED OBLIQUE FRACTURE OF LOWER END OF HUMERUS.—A. B., æt. 10, was admitted on 6th January, from the country, to Dr. Morton's ward, he having sustained the above fracture about two years before. forearm is seen to be flexed at right angles with the arm, the elbow joint admitting of but little movement. The hand is also flexed at right angles with the forearm, and, like the elbow, the wrist joint admits of but slight motion. The fingers are closely flexed on themselves, and almost quite rigid. There is no impairment of sensation, or paralysis, properly speaking. The forearm appears to be in the position it occupied during the union of the fragments, while the flexion of the fingers seems to have gradually progressed to its present degree. The condition is interesting from its rarity, but this is probably the most usual situation when it does occur. Dr. Morton proposes to remove a part of the projecting fragment of the humerus, where it presses on the nerve anteriorly, immediately above elbow joint.

FROM DR. CAMERON'S WARDS.

TRAUMATIC STRICTURE -- PERINEAL SECTION -- PASSAGE OF METALLIC BOUGIES OF EXTRA SIZE.—No less than nineteen cases of stricture of the urethra have been treated in Dr. Cameron's wards during the last six months; thus showing the frequent occurrence of this disease amongst the patients of a large surgical hospital. Of these, 16 have been successfully treated by gradual dilatation, generally by means of the conical metallic bougies. In one case, lately admitted, of tight stricture near the meatus, leading to extensive extravasation of urine, the stricture was at once treated by internal division. and a full sized catheter tied in, after free incision had been made in the scrotum and perineum to relieve the extravasation. The remaining two cases were very obstinate traumatic strictures, and were treated by perineal section. The point of interest in both is that dilatation has been permanently maintained by much larger bougies than the largest usually supplied in British cases of instruments.

This plan of after-treatment, so much recommended by Otis, Van-Buren, Gouley and other American surgeons, has yielded excellent results in both cases.

Case I.—W. D., et. 25, was admitted on 10th July, 1878, No. 2. Wol, XI. with a very troublesome traumatic stricture. It was without difficulty dilated so as to admit a No. 9 or No. 10 bougie; but the passage of such an instrument invariably caused great immediate pain and much after-irritation, while any benefit was evanescent, and in the course of a day or two matters resiled to their old position. He passed quantities of pus and mucus in the urine, and had frequent calls, especially at night, to micturate. In the beginning of August he went to the country, considering himself rather better. On 10th October he returned to hospital worse than ever, and was submitted to perineal section. Under chloroform, a Syme's staff was passed through the stricture, which was freely divided upon it. A full sized catheter was tied into the bladder, and retained for a week, when the passing of Nos. 12, 14, and 16 metallic bougies (the largest being four sizes larger than is supplied in an ordinary case of instruments) was commenced, and has been regularly maintained until now.

The wound healed kindly and quickly and the patient was dismissed on 6th December. He returns as an out patient, twice a week, to have the three instruments referred to passed, which can be easily done by the house surgeon. The man reports that he passes as good a stream of water as he ever did, has no pain whatever, never requires to rise at night and

in fact is in perfect health.

Case II.—In order to pursue the treatment described above it is necessary that the patient shall naturally have a large meatus, or that it shall be enlarged by incision, since this is the tightest part of a normal urethra; the latter course was adopted in the case now to be related. A. M., æt. 15, was admitted on 1st March, 1876, with a traumatic stricture. He was unable to pass water by the meatus, and relieved his bladder, by frequent and painful efforts, through a urinary fistula in the perineum. All attempts to pass the smallest metallic bougie into the bladder were futile. No better success followed frequent and patient attempts to introduce filiform whalebone bougies. Under chloroform, Dr. Cameron tried more than once, by cutting carefully in the middle line of the perineum, to reach the further part of the urethra, but failed. Some time after, the boy was again chloroformed, and the posterior wall of the rectum being held back by a duck-billed speculum, an incision was made in the anterior wall, in more than one place, with the design of opening the membranous portion of the urethra, and passing an instrument from behind forwards after the plan of Mr. Fourneaux Jordan. This, too, was unsuccessful, most probably from the circumstance that

the urethra had been drawn by cicatricial contraction out of the middle line. The boy's state continued to increase in gravity, and shortly afterwards sudden extravasation of urine took place. He was at once chloroformed, and free incisions made into the scrotum, perineum, penis, and above pubes, to relieve the existing distension in all these parts. At the same time as no instrument whatever could be passed into the bladder, and another attempt by cutting in the middle line of the perineum was no more successful than before, a canula and trochar was thrust into the bladder through the rectum; after this the boy was put to bed. He wore the canula for upwards of six weeks, and after its removal appeared to be considerably relieved. Still no instrument could be passed, and he left the hospital and was lost sight of. He returned on 23rd November, 1878, and Dr. Cameron now determined to open the urethra in front of the stricture, and search for its orifice. This had been attempted on one of the previous occasions, but the circumstance that the scrotum overlapped considerably the commencement of the stricture prevented a sufficiently free opening being made. The difficulty was got over in the following way: -Having been once more chloroformed, the boy was tied in the lithotomy position, and the scrotum split longitudinally from an inch below penis to its lower border, care being taken to keep accurately in the middle line, and not to open either tunica vaginalis. half of the scrotum, with its contained testicle, being held aside, at least 2 inches of the urethra in front of the stricture were laid open on a straight grooved staff, passed down to the stricture. The lips of the urethral wound were now held aside by two pairs of artery forceps, and after sponging, a minute orifice was discovered at the bottom of the cul-de-sac. Through this, after one or two disappointing attempts, the passage was at last discovered to the farther dilated portion of the urethra. Communication was established between the two by incision, and the meatus having been enlarged in the direction of the frenum, with a pair of blunt pointed scissors (with a view to the future use of large instruments), a full sized catheter was tied in and retained for a few days. The sequel has been most satisfactory. A No. 16 metallic bougie can be readily passed into the bladder, although the boy is only 15 years of age. He is now in good health, passes his urine in a natural stream and with no undue frequency. Only a pin-point fistula remains in the scrotal incision and will no doubt soon heal.

CASE OF DOUBLE DISLOCATION OF THE JAW.—About two months ago a low caste (Mahar) native, 50 years of age, came for advice, and gave the following history of himself:—Ten days before applying for relief he was washing his mouth and teeth, when he was suddenly seized with a sharp pain in front of each ear, and ever since has been unable to bring his front

teeth together, though he can easily close his lips.

The existing double dislocation was reduced after a little difficulty, caused by the man's struggles and resistance. The patient's condition had been unusually wretched while the displacement of the jaw existed, for his back teeth were either lost or useless; and the poorer natives, who are still suffering from famine, are often forced to eat substances that require to be well masticated. It is difficult for a person who has not been in India to understand how dislocation could be caused by washing the mouth; but the natives set about cleaning their teeth and mouth in the most enthusiastic way, and insert as much of the hand as possible. In this case, however, it is curious that an accident should be caused by an action that had been performed every day for years. Possibly the patient's age and want of nourishing food are the best explanation. The patient was seen a few days ago. He has not been threatened with a return of the displacement.

E. D. MACKELLAR, POONA.

25th September, 1878.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1878–79.
Meeting IV.—6th Dec., 1878.

Dr. Fergus, President, in the Chair.

DR. MACEWEN read a paper on OSTEOTOMY FOR GENU VALGUM, GENU VARUM, ANCHYLOSIS, AND RACHITIS. Though the above was the heading of the paper, it was found that so much time was occupied with the portion treating of genu valgum, that the other parts had to be dealt with by a mere passing reference. Dr. Macewen stated that he had operated by osteotomy

on over forty limbs, and had performed over fifty osteotomies. He described the operation for knock-knee, which he first advanced in a paper published in the Lancet for 30th March. 1878, pointing out that in that paper two operations were spoken of; the one in which a V shaped portion of bone was removed, the other in which a simple incision was made. Both these operations were above the epiphysis of the femur, through the condyloid extremity of shaft, and completely clear of the joint. If the case is severe, he uses several chisels, graduated in such a manner as to form a slight wedge-shaped opening on the inner side of femur; but if the case is slight, a single chisel is sufficient, merely cutting the femur transversely for over two-thirds of its thickness. He argues that if the entire deformity is attempted to be rectified by a V shaped portion of bone removed from the inner side of the femur, it is difficult to estimate the precise wedge necessary to make up the deformity, and one is apt to remove too much or too little; and, again, if the deformity of knock-knees is so rectified it may give rise to a considerable bulge of the knee to the inner side. If, on the other hand, a simple incision. without being wedge shaped (if, indeed, this is possible), is made, the deformity is thus wholly rectified by a wedge shaped portion of a rarified bone taken or brought down from the outer side of the femur. Whereas, the formation on the inner side of a slight wedge opening, only sufficient to half or partially rectify the deformity leaving the other half apart to be made up by the outer side, causes both sides to contribute to the straightening. This operation has the following advantages: the slight wedge formed on the inner side enables the outer portion to be the more easily severed or bent round; both the outer and the inner side of the bone contributing to the rectification of the knock-knee, the limb is more seemly when the operation is concluded, the knee not forming the inward projection, sometimes seen after other methods of operating. The outer side may contribute to rectify the deformity by a bending of the bone, which may happen in very young persons, by producing a green stick fracture, which fills up the wedge by rarefied bone; thirdly, by producing a simple wedge shaped hiatus which, being small, the periosteum, though stretched, still bridges the interspace, thus insuring the formation of new bone. He adversely criticized the operation for removal of the internal condyle, pointing out its defects. He also stated that, adding his own cases to those performed after his method by six surgeons, there were over seventy limbs operated on without a single fatal case.

Dr. Macewen showed a dozen cases of persons who had been operated on for knock-knees, bow-legs, and one for rickety deformity, all of whom had straight limbs, supple joints, and were able to walk well. The first case operated on, more than eighteen months ago, was also shown. He could neither walk nor stand before the operation, and the patient now stated that he had one day lately walked out to Uddingston and back, a distance of about fourteen miles, and that without undue fatigue. He was now a strong healthy looking lad. Most of those patients operated on were between 14 and 18 years of age, and he preferred patients not younger than 8 or older than 25, though the most favourable time was about 15 to 18 years. At the same time he had operated on some

persons much younger.

Dr. Eben. Watson said that he must congratulate Dr. Macewen on the success and on the number of his cases. He had himself operated in comparatively few instances. The case of his to which Dr. Macewen referred was one, not of knock-knee, but of bow-leg, in which he clipped out an inch of the fibula, and simply cut across the tibia. deformity had been very great, but the cure was perfectly satisfactory. In the Royal Infirmary antisepticism was, by most of the surgeons, so thoroughly carried out, that many of the dangers of these operations were avoided. The dressings which he employed were the ordinary antiseptic dressings, and two straight splints, such as are commonly used for compound fracture. He had what might be a prejudice against box splints; believing that the more simple and easily managed these appliances were the better. He could corroborate Dr. Macewen's statement in regard to the rapidity with which the wounds healed in these cases. He did not allow the patients to use the limb for six weeks, believing it to be of the first importance to give it time for the healing and strengthening of the bone. The surgeon should always convince himself that there was thorough union before he gave permission to the patient to use his limb. In regard to the knock-knee, it was often very tempting to try the operation of cutting off the inner condyle of the femur; but the danger was great. He was quite sure that in almost all cases in which this had been done the cartilage was fractured, and blood allowed to enter the joint.

Dr. Watson did not quite agree with Dr. Macewen in thinking that the advantage of cutting a wedge shaped piece out of the side of the bone was that the surgeon, having a fulcrum in the middle of the bone, produced another wedge on the opposite side. If Dr. Macewen meant this, he could not agree with him, as, in truth, he believed that a simple incision across the bone was alone necessary for the rectification of its axis, and that nature filled up the vacancy by a wedge of new bone.

Dr. Alexander Patterson said that great credit was due to Dr. Macewen for this operation, which would take rank as one of the great operations in surgery. On hearing it described it appeared a simple enough operation, but any one who knew what it was to treat two compound fractures on the same patient, at one time, would not undervalue the gravity of the operation. He had now performed it seven times, and in all of them it had done very well. He used a somewhat broader chisel than the larger one shown, indeed, as near as possible to the breadth of the femur. He used the same form of splint as that exhibited. In the case of which he now exhibited a drawing (showing the extent of the original deformity), the measurement from toe to toe was 25 inches. The operation was performed according to Dr. Macewen's method, but even then it was found extremely difficult to make the leg entirely straight. However, by making a slight modification in the

splints, the desired end was attained.

Mr. H. E. Clark said that he had operated thrice, following Dr. Macewen's instructions, and was well satisfied with the The following points seemed to him to deserve attention:—(1.) In view of the fact that the elongation was in the internal condyle, it would appear better to take a wedge shaped portion from the internal condyle. was the principle of Ogston's operation, more especially as carried out by Mr. Chiene. (2.) At the point of attachment of the internal condyle there was often a tubercle or This was the point of attachment of the lateral ligaments. (3.) As regarded the proper age for operating, the diseased condition was rickets. If they operated before the ricketty condition had been outgrown, the new bone would be ricketty, and the deformity might recur. proper age was perhaps about 15 or 16. (4.) Dr. Macewen kept on his dressings for two weeks, without changing them. It had been made a charge against the antiseptic system that the dressings had to be so often changed, and that, therefore, it was an expensive and troublesome system. This idea was not borne out by Dr. Macewen's mode of treatment. same time, the antiseptic dressings might be kept on too long. He had seen a case in which, from the length of time they were kept on, the discharge had very largely excoriated the surface.

Dr. Morton suggested to Dr. Macewen whether section of the outer condyle would not be preferable. Two reasons occurred to him for the preference: (1.) It would bring down that condyle to the same horizontal plane as the inner one; and (2.) There was less risk of touching an artery. He had himself performed the operation on one of the limbs of a girl, and with most satisfactory results. On the other limb he had operated by brisement forcé. At the present time he had in his wards a little boy with a considerable tendency to knockknee. This boy had a compensatory tendency to walk on the outside of the foot. The result of this had been to bring on a kind of talipes varus, which, in this instance, of course, differed from the ordinary varus in being acquired.

Dr. Charteris inquired whether there existed any data for determining whether rickets was an affection more common in Glasgow than formerly, and if so, whether the increased frequency had set in coincidently with the introduction of Loch Katrine water, which was well known to be a very soft

water?

The President, in reply to this question, pointed out that the total quantity of water consumed in an unboiled state by any person bore only a small ratio to that consumed after boiling, and after the consequent precipitation of the lime held in solution. Besides, the amount of lime consumed at any one time by drinking any water, however hard, was very small—less, probably than that taken in by one table spoonful of oatmeal porridge. Probably, altered habits of living, resulting in the discarding of this wholesome article of diet, and substituting for it one less nutritious, had more to do with the production of rickets than the drinking of soft water. His own recollection of the state of things prior to the introduction of Loch Katrine water was, that rickets was relatively as prevalent then as now.

Mr. John Reid said that he looked on this operation as making an era in surgery. The procedure recommended by Dr. Macewen was much preferable to that of cutting in to the condyle—a very dangerous operation. He (Mr. Reid) had never opposed what was called the antiseptic system as a mode of practice, he had only strenuously declined to accept the sporule theory on which it was founded by Mr. Lister. He did not think that drinking soft water had much to do with the production of rickets.

Dr. Hugh Thomson said that there could be no doubt that the chief excellence of the last operation described by Dr. Macewen was that it did not interfere with the articulation at all. He would, however, be a little afraid that the joint might be entered, the attachment of the synovial membrane being so near. By operating high up a relatively smaller wedge of bone taken out would have a greater effect.

Dr. J. C. Renton gave an account of a case of knock-knee treated by him on Dr. Macewen's method. It was only, however, after the tendon of the biceps had been cut that he was

able to get the limb into a straight position.

After some words from Mr. Tennant and Dr Glaister,

Dr. Macewen first thanked the speakers for the encomiums passed on his efforts in carrying out osteotomy, and proceeding to reply, said that Dr. Morton's plan of operating would be applicable only in cases of limited deformity. The statement that a wedge shaped opening was not formed by means of the graduated chisels, appeared to rest on a misunderstanding. The most remarkable thing about Dr. Patterson's case was the extent of the deformity. Dr. Patterson gave the measurements in his case from toe to toe, while the person lay in bed with the knees together, and it then gave 25 inches. His own measurements had been made, not between toe and toe, as these were not fixed points, but between the two maleoli, and in some of the cases the distance was 18 and 20 inches; and if these cases had been measured between toe and toe they would have given over 25 inches. In Mr. Clark's criticism, in regard to taking the wedge from the internal condyle, he overlooked the fact that the cause of the deformity, according to French authors, lay in a turning upwards of the lower third of the femoral shaft, and did not lie in the internal condyle. He complimented Mr. Reid on having at last seen the light regarding antiseptics, and thought that his conversion to antisepticism was what might be expected from his philosophic mind. It was quite true that, in this country, there had been one death from Ogston's operation, besides three or four in Germany. There could be no doubt that without antiseptics the operation he had described would be impossible. No one who pinned his faith to that treatment and faithfully carried it out would have cause to repent. It had rendered possible operations never before dreamt of, and produced results in surgery never before attained. The patient might die of shock, but he could hardly from the causes which led to fatal results under other treatment.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Session 1878–79. Meeting III.—Dec. 10th, 1878.

Dr. Alex. Robertson, President, in the Chair.

Dr. Renton showed a patient, aged 69, on whom he had operated for cataract, by posterior division of the capsule (Mr. Wharton Jones' operation). The division was effected four times, at intervals of five, four, and three months; and the patient, with the aid of $2\frac{1}{2}$ inch convex spectacles read an article in the Times' newspaper to the members.

Mr. Clark said that this operation was best in cases where

the lens was soft; if hard it did not dissolve readily.

Dr. George Buchanan showed a case in which there was EXTENSIVE LOSS OF BRAIN SUBSTANCE. A woman, 21 years of age, was working in a mill, when a bolt struck her head. She was admitted to the Western Infirmary on 25th July, 1878, soon after the accident. She was quite conscious, and presented a scalp wound which led down to a gap in the skull as large as a halfpenny. The bone was broken and comminuted, and driven into the brain. Hanging from the wound there was a bit of brain substance, the size of the finger, and composed of convolution and white brain substance. Buchanan could insert his finger in the hole up to the first joint, and there were bits of bone driven in an inch. The question arose whether she should be left alone; but it was decided to remove the fragments of bone which were presenting edgeways to the brain, and to clear away the torn brain substance. From that day to this there had not been a single bad symptom—no headache or pain of any kind. The wound granulated, and there was no hernia cerebri. It is now nearly healed. The girl is not conscious of any effect whatever from the loss of brain substance. There is no paralysis, and no depreciation of the mental functions could be discovered. seat of injury is the right side of the forehead, at its upper part, near the edge of the hair.

DR. FOULIS showed a CASE IN WHICH THE THIRD LEFT FRONTAL CONVOLUTION WAS ABSENT, WITHOUT APHASIA. The case was that of a house painter, who died at the age of 64,

of cardiac and renal disease. At the autopsy the lesion of the brain was discovered, no indication of cerebral disease having been observed during life. The skull and dura mater were sound; but at the site of the third left frontal convolution and two-thirds of the island of Reil there was an irregular excavation in the brain. The pia mater over this area was disorganized, and no longer vascular, being converted into a transparent shreddy membrane, adherent to the pulpy brown surface of the excavation. The arachnoid was raised up by clear fluid over the diseased area, and clear bands stretched from it across the fluid to the pia mater. The rest of the brain tissue was normal. The wasting of the convolutions probably dated from a fit three and a half years before death, and was due to embolism of the branch of the middle cerebral artery supplying the area affected. The presence of mitral vegetations accounted for the embolism. A minute investigation into the past history of the patient failed to trace any, even a temporary aphasia. According to Broca's theory of exclusive localisation of the function of speech in the third left frontal convolution, there ought to have been some loss of language. A very thin and hollow shred of this convolution at the posterior extremity of the convolution had, indeed, escaped injury; but one could not imagine it to have carried on the function. The case, therefore, negatived Broca's more exclusive view; but it was easily explicable on the more comprehensive theory of Dr. Dodds, that there are two speech centres, right and left, embracing the island of Reil, posterior part of third frontal, and lower end of ascending frontal. One of these, usually the left, but in rarer cases the right, was the leading centre; and if the lesion happened to involve only the subordinate centre, speech might be but little or not at all affected. In the present case it was probable that the left side, which was the one injured, had been the subordinate one.

Dr. Joseph Coats did not agree with Dr. Foulis, that this case militated against the view that the speech centre is localised in the left side of the brain. Broca had described the posterior part of the inferior frontal convolution as the seat of the function of speech. The experiments and observations of Ferrier and others had tended to place it a little farther back than Broca originally stated, and from the illustrations in Ferrier's new book on The Localisation of Cerebral Disease, which was handed round, it would be seen that the lesion which interferes with speech is in the extreme posterior part of the inferior frontal, and the lower part of the ascending frontal, more especially the operculum. Now, comparing

Ferrier's illustration with the brain before the Society it would be seen that this part was preserved in the present case. The gap in the brain substance came just up to the speech area, but did not involve it. Dr. Coats regarded this case as of very great importance in relation to the function of the frontal convolutions. He had been greatly interested in the accounts Dr. Foulis gave of the loss of memory, and hoped that this part of the case would be thoroughly worked out. In reference to Dr. Buchanan's case, as the lesion was entirely out of the motor region, there was no paralysis to be looked for.

Dr. Alexander Robertson said that he did not think the lesion in Dr. Foulis' case was such as necessarily to induce aphasia, supposing the brain to be formed after the ordinary type. The whole of the operculum was sound, and the portion of the third frontal convolution left was considerable (allowance being made for shrinking in the preservative fluid). Although the posterior third of the inferior frontal convolution is called Broca's convolution, yet he did not know that Broca himself maintained that the whole of that part of the brain was necessarily involved in aphasia. The fact was that since his first case Broca had done very little towards the elucidation of the subject; and the observations of other workers, Dr. Robertson himself included, are in support of the opinion that the backmost part of that convolution and the operculum are particularly associated with the function in question. This is in accordance with Ferrier's views, based on experiments on monkeys; in fact, pathological observations are wonderfully in harmony with the results of his experiments in this question. It is true that exceptions occur in which the speech centre is apparently on the right instead of the left side, and such exceptions are to be looked for. In these the right centre is educated, and this is commonly associated with left-handedness, though, probably, not always so. Dr. Foulis' case is not to be placed in this category, as the lesion does not extend back far enough to necessarily involve the speech centre. The present position of the question is that the speech function is on one side of the brain, not on both; and in nineteen cases out of twenty it is on the left side.

Dr. Perry showed Cases of Malignant Disease of the Lung (see last month's Journal, p. 31). In relation to the first of these cases, he referred to a case of Dr. West's, reported in the British Medical Journal, Dec. 7, 1878. The second case was that of secondary myeloid sarcoma of the lung, and in connection with it he referred to a case shown by Dr. Knox,

at a former meeting of the Society, in which the question of the prognosis in myeloid sarcoma was raised (see this *Jour*nal for 1878, p. 573). In the present instance, and in another reported by Dr. Cameron, rapid development of secondary

tumours took place in internal organs.

Dr. Cameron stated, with regard to the case of myeloid sarcoma, shown by Dr. Perry, that the primary tumour was in the radius. When admitted, the patient, a boy 18 years of age, stated that the tumour had been punctured once or twice before admission, and that bleeding had been so free from the punctures that pressure had to be employed to stop it. The forearm was tense, swollen, and painful, and distinctly fluctuant. Dr. Cameron having anæsthetised the patient, made an incision into the tumour, and, putting in his finger, felt a sac resembling an aneurism, in the walls of which were spicula of bone. The radius could also be felt fractured. In spite of the fact that the lymphatic glands of the axilla were greatly enlarged, and that the boy was very cachectic, amputation was immediately resorted to. Recovery was rapid. The axillary glands became reduced to the normal size, but when discharged with the stump healed, the patient was still pale and cachectic. Later on, he was admitted under Dr. Perry's care, as described in his paper, and died of secondary myeloid sarcoma of the lung. After death a very careful examination of the axillary glands was made, but no trace of secondary myeloid or other tumour could be detected under the microscope. Dr. Cameron said that this was characteristic of sarcomas, which differ from cancers, in respect that the sarcomas do not tend to infect lymphatic glands like the cancers. It was generally admitted that secondary development of tumours in distant organs is essentially due to embolism, particles being carried by the lymphatic or blood-vessels respectively, and lodged in the lymphatic glands, or internal organs. In the myeloid sarcomata the vessels are very large and numerous, their walls rudimentary and very thin, and blood cysts easily formed. All the conditions, therefore, existed which would favour a secondary infection by the blood-vessels. This was the second case he had seen of sarcoma developing secondary tumours in the lungs, the other being a case of spindle cell sarcoma over the pubic region, in which secondary growth took place in the right lung, evidenced by presence of a dull area, and increase of temperature on that side. No post-morten examination was made.

DR. A. WOOD SMITH showed the MEDIASTINAL TUMOUR described in last number of the Journal, at p. 27.

Dr. H. C. Cameron showed a Distended and Distorted Ur-ETER from a man who, four years before death, began to suffer from pain over the left kidney, and down the ureter and the thigh, with occasional hæmaturia. Diagnosis was made of calculus in the left ureter. Patient was at that time in the prime of life, and in spite of the extreme suffering continued to go about his work. In the course of time he lost flesh, and the pain became overpowering. This led to a proposal being made to cut down on the left kidney, but tubercular disease of the lungs made its appearance, and a fistula in ano, and the patient died. After death the left ureter was found dilated, and it presented a sigmoid bend near the kidney. This bend was retained by old inflammatory adhesions, and from its shape acted as a kind of valve, so that the fluid from the distended kidney only occasionally escaped, when, by changes of position the bend was somewhat straightened out. Dr. Cameron referred to a previous case in which an enormous fluctuant tumour on the left side had suddenly disappeared on the expulsion of a calculus from the ureter. In the present case no calculus was found, but, possibly the passage of a calculus may have been the exciting cause of the inflammation which led to the adhesions. Rayer mentions cases of occlusion of the ureter by bridles and bands of lymph. Todd, in his Lectures, dwelt on the association of hæmaturia with inflammation of the ureter.

MEDICAL ITEMS.

UNDER THE DIRECTION OF

ALEX. NAPIER, M.D.

Vaseline and Ungt. Vaselini Plumbicum, in Skin Diseases.—Professor Kaposi, after stating that all emollient substances hitherto used in diseases of the skin, when the epidermis is removed or the surface is sensitive, such as oils, lard, glycerine, &c., are more or less irritating in most cases, refers to the bland and non-irritating properties of vaseline or petroleum jelly (with this also may be classed ozokerin and ungt. petrolei). These have no tendency to become rancid, and are useful in softening and removing crusts and scales, as in cases of eczema squamosum, when the surface is dry and desquamating. He introduces an ointment which promises to be of great value. This is a modification of Hebra's well known ungt. diachyli,

which is seldom met with properly prepared except at Vienna. This ointment, for which Kaposi proposes the name of ungt. vaselini plumbicum, is made by dissolving and incorporating thoroughly, by aid of heat, equal parts of lead plaster and vaseline, to which a little oil of bergamotte may be added to scent. It causes no burning sensation on exceriated parts, and is especially available in eczema. It is admitted by Kaposi that the original ungt. diachylis gave rise to unpleasant heat, and even acute exacerbations of the eczema, due, he believes, to an evolution of fatty acids from the oil during boiling, and to an imperfect saponification of the oxide of lead.—(Wiener Med. Wochenschrift). Edin. Med. Journal, Dec., 1878.

Histology and Pathology of Xanthelasma.—M. Chambard, from an examination of three cases, concludes that the lesions of the affected skin consist in a twofold process of irritation and degeneration, and that the two principal forms of the disease (X. planum, X. tuberosum), while identical from a clinical point of view, present also the same histological The irritant process, in the smooth form of the disease, is shown in the granular swelling of the connective tissue cells, and in the proliferation of their nuclei; in the tuberculated form, by a sclerosis and thickening of the dermal connective tissue, of the walls of the small arteries, of the fibrous capsules of the sudoriparous glands, and of the connective tissue surrounding and penetrating the fasciculi of nerves. The degenerative process is characterized by a fatty transformation of the connective tissue cells, which occurs in both forms of the disease, but is most marked in the smooth The changes in the nerves and the compression of the nerve tubes by the newly formed connective tissue around and between them, sufficiently account for the pricking sensations which precede and accompany the eruption of the xanthelasmic tubercles, and the pains which these tubercles occasion are somewhat analogous to those of painful cicatrices, or fibromatous tumours of the subcutaneous nerves.—Bulletin de l'Acad. de Médicine, 19th November, 1878.—D. N. K.

Corns and their Treatment.—In L'Année Médicale for June, 1878, M. Guibout thus explains the pathology and treatment of this too familiar infirmity. These execrable corns, he says, consist of an induration and hypertrophy of the epidermis which grows downwards, taking the form of a nail, with the point directed against the deeper parts. The portion of skin in contact with the induration becomes inflamed and altered,

its papillæ disappear, and at last it becomes a veritable matrix, producing from below new layers of horny epidermis as the upper layers are removed. His treatment is to soften the corn by applying to it, for one night, an ointment consisting of turpentine and acetate of copper, each one part; white resin 2 parts, and yellow wax 4 parts. The corn should then be excised with scissors, care being taken to go deep enough to remove its summit. After excision the matrix should be cauterised with sulphuric acid, else the corn will be reproduced.

J. M.

Tannate of Quinia in Whooping Cough.—Dr. Swan, of South Chicago, has tried the following formula in an epidemic of whooping cough, with very favourable results.

Quinia Sulphate 3i.

Tannic Acid gr. xv.

Mix and add to water, syrup, or any agreeable elixir. The dose should be proportioned to the age of the child. Doubtless the intensely bitter impression made upon the fauces and glottis contributes to the beneficial influence of the remedy, though it adds to the difficulty of administration to many children, and risks an increase of the paroxysms. When not objected to, however, its effect has been, in many instances, to abort the disease in an average period of 3.8 days.—Chicago Med. Journal.

Jaborandi in Chronic Pleurisy.—Professor Da Costa showed in his Clinic a man, aged 23 years, who had previously suffered from chronic pleurisy, when his chest had been aspirated and five pints of clear serum evacuated. Five weeks afterwards he had a return of chills, which had troubled him daily before the operation, and on examination it was found that the fluid had re-collected. As an alternative to aspiration Dr. Da Costa gave him a drachm of jaborandi, four times daily. At the end of a week the sense of coldness had passed off, the serum accumulated in the chest had disappeared; the temperature fell from 101° to 98° and the patient ultimately recovered. Profuse sweating continued during the action of the remedy.—Med. and Surg. Reporter.

Contagiousness of Tuberculosis.—Dr. Reich, of Mülheim, reports (in the Ber. Klin. Woch., September, 1878), a singular series of cases in which tuberculosis seemed to be communicated directly, from mouth to mouth, to a number of children

by a phthisical midwife. There were in Neuenbourg two midwives, Mme. R. and Mme. S., the latter being distinctly phthisical, with an abundant purulent expectoration. Dr. R., having one day delivered a patient by turning, noticed the nurse S. sucking the mucus from the mouth of the child, and blowing directly into the lungs, mouth to mouth, to establish respiration. This child, at the end of three weeks, began to droop, and died in three months of tubercular meningitis. Shortly afterwards two other children, under the care of the same nurse, died of the same disease. Dr. R., having his suspicions in this way aroused, made inquiry, and found that from 4th April, 1875, to 10th May, 1876, seven children, besides the three already mentioned, all attended by Mme. S., had been carried off by tubercular meningitis within their first year. Nothing of this kind happened in the practice of Mme. R. during the same period. In July, 1876, Mme. S. herself died of consumption. It was well known that this nurse was accustomed to clean the children's mouths of mucus in the manner above described; she was also very kind to her little patients, constantly kissing and caressing them. +Lyon Médical, 5th January, 1879.

Removal of the Lower Portion of the Left Lung— Recovery.—Dr. Fordyce Grinnell (Cincinnati Lancet and Clinic, 14th September, 1878) reports the removal, by himself, of the lower portion of the left lung of an Indian boy, eight years old, who had been wounded by a barbed arrow, in extracting which he had pulled out this part of the lung. The external wound was situated between the fifth and sixth ribs. just to the left of the median line. Twenty-four hours afterwards (the "medicine man" having meanwhile failed to reduce the lung by enchantment) the protruded portion was found congested, and fast becoming gangrenous; this was then ligated and removed, the cut surface touched with perchloride of iron, and returned within the opening made by the arrow. The piece of lung removed was 45 inches long, and 23 inches broad at its widest part. Some degree of suppuration took place, and two weeks after, the ligature came away with a quantity of pus. The boy has steadily improved, and is now beginning to resume his wonted sports.—Detroit Lancet. November, 1878.

Poisoning by Carbolic Acid injected into the Uterus.

—After the removal of a fibrous tumour of the cervix, Dr.

Rheinstadter injected daily into the uterus a ten per cent

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solution of carbolic acid. One day only a small portion of the solution which had entered the uterine cavity was returned, when suddenly the patient became unconscious, the extremities were thrown into tonic convulsions, the face became pale and covered by perspiration; breathing first ceased, but immediately started again, becoming superficial and slow; the pulse could scarcely be counted, and the abdomen was greatly distended. As death seemed impending, and the body was already cold, Dr. R. quickly administered a subcutaneous injection of tincture of musk and other; the patient at once revived, the pulse again became appreciable, and in about a quarter of an hour consciousness returned. There was no general peritonitis, as might have been expected.—(Schmidt's Jahrbücher). Lyon Médical, 10th Nov., 1878.

Death from Ergot employed to cause Abortion.—A case of this nature is reported in New Remedies for Oct., 1878. The effects produced by the drug were swelling and discoloration of the lips and face, dilated pupils, anxious and alarmed expression of countenance, pulse of 48 and weak, cold extremities, purplish hue of skin over the entire surface, persistent vomiting and purging, and an alarming degree of prostration. Coma supervened; the action of the heart became more feeble, and the breathing irregular, and death took place two days after the abortion occurred, and four days after taking the ergot, which was afterwards ascertained to have been in the form of fluid extract, and in quantity four ounces.

Christie's Method of Controlling Uterine Hæmorrhage. —The Lyon Médical, for 21st April, 1878, contains a report of the meeting of the Glasgow Medico-Chirurgical Society, held on the 1st March last. To the description of the apparatus invented by Dr. Christie (of Carrigart, Donegal), for the arrest of uterine hæmorrhage, the editor adds the following note:—"This communication gave rise to a discussion in which a number of those present took part, but neither they nor Dr. Christie seemed to have any knowledge of what has already been accomplished in this direction by the obstetricians of Lyons." From this it may be inferred that Dr. Christie's invention, though original so far as he is concerned, is not absolutely new.

On the Indications and Contra-Indications for Ovariotomy.—These are thus formulated in a general manner by Dr. Duplay:—

1. The operation is only indicated when the cyst, by its size, produces considerable discomfort or pain, or when accidental circumstances, local or general, cause imminent danger to life.

2. On the other hand, although the operation should not be performed in extremely advanced cases as a general rule, yet it is not contra-indicated by the existence of serious complications, such as peritonitis, inflammation, suppuration, gangrene of the cyst, or extreme emaciation.

3. Ovariotomy is formally contra-indicated in the case of cystic disease of the ovary complicating any disease which, independently of the presence of the cyst, may ultimately

lead to death.

4. The different local conditions dependent on the state of the cyst, its walls and contents, its connections, or on the state of the peritoneum (ascites), are but of slight importance, either for or against the operation. Except first, where the cyst is unilocular, and has serous, not albuminous, contents; in these cases the operation is generally contra-indicated. Secondly, where there are extensive adhesions to the sides of the true pelvis and the pelvic organs; the disease, especially if accompanied by much ascites, is then most frequently malignant, or, at least, so much complicated that, without definitely proscribing ovariotomy, it should be delayed as long as possible.

5. Lastly, ovariotomy is applicable to cases complicated with pregnancy, when the lives of both mother and child are directly threatened by the development of the tumour, and when puncture has been made without effect.—Bulletin de

l'Acad. de Médecine, 29th October, 1878.—D. N. K.

Artificial Anus in Cases of Cancer of Rectum.—Dr. Léon Labbè doubts whether operations on the rectum, the results of which are in these later years remarkably satisfactory, are of any use whatever in cases of cancer of that part of the intestine, and whether they do not frequently hasten the course of the disease. In the majority of cases operated on, a relapse takes place, according to all observers, in the course of a few months. Labbè therefore thinks it preferable, in most cases, to let the disease alone, and by an operation at a distance to relieve the obstruction of the bowel. Even in those cases in which the obstruction is incomplete, and there is incessant pain and irritation at the seat of the disease, the formation of an artificial anus will make life more supportable, and may even retard the progress of the disease. He prefers lumbar colotomy to the operation of Littre.—Bulletin de l'Acad. de Méd., 26th November, 1878.—D. N. K.

Length of the Fœtus.—The following method, discovered by Dr. Delabost, of Rouen, offers a ready means of recalling to mind the length of the fœtus at any given age. The length of the fœtus at the different stages of intra-uterine life is indicated by the square of the number of the corresponding month—this rule, however, applying only to the first six months. Thus:—

At the 1st month the fœtus measures $1^2 = 1$ ctm. ,, 2nd ,, ,, $2^2 = 4$ ctm. ,, 3rd ,, ,, $3^2 = 9$ ctm. ,, 4th ,, ,, $4^2 = 16$ ctm. ,, 5th ,, ,, $5^2 = 25$ ctm. ,, 6th ,, ,, $6^2 = 36$ ctm.

In the three last months the increase is from 4—5 ctm. per month.

At the 7th month the fectus measures 36 + 4 = 40 ctm. ,, 8th ,, 40 + 5 = 45 ctm. ,, 9th ,, 45 + 5 = 50 ctm.

The numbers so obtained, of course, express only the average or usual length of the factus at the various months of pregnancy.—(Union Méd. de Rouen.—Journal de Bordeaux). Lyon Médical, 22nd December, 1878.

The Pathology of Pulmonary Œdema.—A very suggestive paper appears in Virchow's Archiv (Vol. lxxii, p. 375) by Welch, a pupil of Cohnheim, on this subject. The author first points out the unsatisfactory nature of the causes usually assigned for cedema of the lungs. It is usually assumed that a passive or active congestion is enough to produce it, but in a series of experiments it came out that it takes an enormous increase in the blood pressure to produce edema. He tried, by obstructing the aortic system, to produce it, but was only successful when he had ligatured all the branches except one of the carotids, or one subclavian. Again, in order to produce cedema by obstructing the pulmonary veins, it is necessary to close them almost completely. Hence it appears to be necessary to increase the blood pressure enormously, and no obstruction of the circulation in the human subject is likely by itself to be sufficient to cause adema. It occurred to the author that if the left ventricle of the heart were weakened, while the right remained acting strongly, there would here be a condition capable of producing a great excess of pressure in the pulmonary circulation. He endeavoured to test this in animals, but it was long before he succeeded in weakening the left ventricle without the right. At last by squeezing the left

ventricle in rabbits between the finger and thumb, he produced the desired effect, and he found that pulmonary cedema was regularly produced. If this be the cause of pulmonary cedema in the human subject, it will explain many apparent anomalies, such as its sudden occurrence; its appearance in one case while remaining absent in another case apparently similar; its absence in cases where there is the greatest obstruction to the pulmonary circulation.

Tolerance of Chloral Hydrate.—The details of a case of extreme tolerance of hydrate of chloral are given in the Med. and Surg. Reporter, 30th November, 1878, by Dr. J. N. Dixon. His patient, who was suffering from delirium tremens, took, within three and a half hours, 240 grains of the drug, and yet had not become even drowsy. The only effects visible were an excessively rapid, irregular, and intermittent pulse, hallucinations, confusion of thought, slight dyspnæa, flushed face, and intensely injected eyes. About five hours afterwards, that is, in eight and a half hours from taking the first of the mixture, the patient fell asleep, and slept for thirty hours. In two days he was well. He had never before taken chloral.

Diagnosis and Treatment of Carbolism.—A much more positive symptom of poisoning by carbolic acid than the peculiar dark brown or greenish discoloration of the urine is the diminution of simple sulphates, and the presence of so-called compound sulphates, and non-poisonous sulpho-carbolates in the urine. Dr. Sonnenberg examines urine for sulphates by first acidulating it with acetic acid and then adding chloride of barium, and determines the quantity of the salt by the amount deposited. In some severe cases there may be no discoloration and no sulphates present.

Baumann's experiments show that sulphate of soda, given as an antidote, causes not only an increase of the sulphates excreted, but causes also a disappearance of other symptoms.

—St. Petersburg Med. Woch.; quoted in New Remedies, June,

1878.

Sodic Salicylate in Diabetes Mellitus.—Ryba and Plummert have arrived at the following conclusions regarding the use of salicylate of soda in diabetes; (1.) In daily amounts of two drachms it determines a decided diminution in the amount of sugar excreted. (2.) The best results are to be obtained in the more recent cases. (3.) The above diminution may be made more striking by restricting

the hydro-carbonaceous elements of the diet. (4.) The polyuria usually yields consentaneously with the glycosuria. Other diabetic symptoms (e. g., the body weight), are favourably influenced. In two cases the symptoms were at first aggravated, but soon yielded under this treatment.—(Präger Med. Woch). Detroit Lancet, Oct., 1878.

Collodion in Sea Sickness.—Dr. Laederich advocates the use of collodion to prevent sea sickness. He gives particulars of two cases. The first is that of an officer who had suffered so much going to and returning from Mexico that he hesitated to take the packet from Caen to Havre. He did so, however, and by using the collodion had no sickness, though the weather was stormy, and most of the passengers sick. other case was that of a young American lady, who had several times crossed the ocean, and each time suffered terribly. Thanks to the collodion, she made the last voyage with only a slight feeling of malaise; no vomiting or loss of appetite. His mode of using the collodion is to apply with a brush three layers successively over the epigastric region, extending to the border of the ribs superiorly, on each side to beyond the mammary line, and inferiorly to below the umbilicus. Applied in this way it is a powerful anti-emetic, having been employed with some success in cases of traumatic peritonitis with severe vomiting. Dr. Laederich thinks that this anti-emetic property may render it useful in curing as well as preventing sea sickness.—L'Année Médicale, June, 1878. J. M.

Preventive Treatment of Cleft Palate and Hare-lip.—Dr. T. P. Tuckey has had under his observation two families in which these malformations were very prevalent. In one of them all the children (six), and in the other, which consisted of eight members, nearly all, were affected. Having the impression that a deficiency of earthy salts in the system of the mother during pregnancy is the main cause of such faults of development, he put the two patients in question on the following mixture, as soon as it was ascertained that they had again become pregnant:—

Calcis. Phosph. 5i 9 i. Sod. Chloridi. Sod. Phosph. 5i. Sod. Phosph. 5i. Sod. Phosph. 5i.

Magnes. Bicarb.

Mix and add to an eight ounce mixture, composed of gelatine, syrup of ginger, and aq. cinnamom: 5i three times a day. This they continued to take during the whole period of

gestation, and in both instances the children born presented no

trace of deformity.

Dr. T. also makes some remarks on the diagnosis of sex while the child is still in utero. He believes that the right ovary is intended for the production of males, the left for the production of females, basing this view on fifteen cases in which he had an opportunity of introducing the hand into the cavity of the uterus. He found the placenta attached to the right of the median line when the child was male, to the left when it was female. In one instance only was the placenta attached low down on the left side, when the child was of the male sex, but he does not think that this affects his theory "any more than the fact of a feetus being found in the Fallopian tube would disprove the well known fact that its proper place is the uterus." He holds, therefore, that if the site of the placenta can be determined, we can pretty confidently predict the sex of the child.—The Practitioner, December, 1878.

Malformation of the Sternum—Case of M. Groux.*— M. Groux, who, twenty years ago, excited so much interest among anatomists in this country and on the Continent, on account of the unusual congenital defect (complete median fissure of the sternum) which he presented in his own person. has just died in America, at the age of 45. The following is the report of the post-morten examination:—"Before opening the thorax the trachea was ligated, to prevent displacement of the heart by collapse of the lungs. An incision through the skin and superficial fascia opened directly into the anterior mediastinum. No other structure bridged the space between the lateral halves of the bone. The heart was found normal in size and shape; its position was slightly higher than usual, the apex presenting at the level of the upper border of the fifth rib. The right auricle lay wholly to the right of the median line. The position of the right ventricle corresponded precisely with that of the pulsating tumour observed during life. Were the lateral halves of the malformed bone united, a slight deficiency in width would be seen at the upper portion of the manubrium, perhaps one-half inch. The lower segment of the gladiolus would also be found somewhat smaller than usual. Otherwise, there is no deficiency of bony substance. The articulations of the fifth, sixth, and seventh costal cartilages deviate somewhat from their normal relations to the lower segment of the gladiolus. While the

^{*} Dr. Allen Thomson described this case very fully in the Glasgow Medical Journal, April, 1858.

fissure divides the entire bone, the lateral portions of the lower segment of the gladiolus articulate with each other. Each articular surface is covered by cartilage, and the two parts of the bone are bound together by external ligamentous bands. The articular cartilages of this joint blend below with the ensiform appendix. The verticle depth of the fissure, from the level of the sterno-clavicular articulation to the bottom of the cleft, is 4 inches. Width at the level of the first costal cartilage 1 inch. Width at the widest part 1.4 inch." The sternum and adjoining parts have been carefully prepared, and are now in the Museum of the Brooklyn Anatomical and Surgical Club, to which they were presented by the widow of Dr. Groux.—Proceedings of Med. Soc. of Co. of Kings, January, 1879.

Books, Pamphlets, &c., Received.

Introductory Address at St. George's Hospital, October 1, 1878, On Specialism in the Medical Profession. By Thomas T. Whipham, M.D. London: Longmans, Green, & Co. 1878.

Dangers to Health: A Pictorial Guide to Domestic Sanitary Defects. By T. Pridgin Teale, M.A., Surgeon to the General Infirmary,

Leeds. London: J. & A. Churchill. 1878.

Papers on the Female Perineum, &c. By J. Matthews Duncan, A.M., M.D., &c. London: J. & A. Churchill. 1879.

Diphtheria, its Nature and Treatment, Varieties, and Local Expressions. By Morell MacKenzie, M.D. London: J. & A. Churchill. 1879.

A Manual of Practical Chemistry, the Analysis of Foods, and the Detection of Poisons. By Alexander Wynter Blyth, M.R.C.S. London: Charles Griffin & Co. 1879.

On Asthma, its Pathology and Treatment. By J. B. Berkart, M.D.

London: J. & A. Churchill. 1878.

Transactions of the Medical Society of the State of Pennsylvania at its Twenty-eighth Annual Session, held at Pittsburg, May, 1878.

Philadelphia: Collins, Printer. 1878.

Aids to Therapeutics and Materia Medica. Specially designed for students and junior practitioners. Part I. The Non-Metallic and Metallic Elements, Alcoholic and Ethereal Preparations, &c. By C. E. Armand Semple, B.A., M.B., &c. London: Baillière, Tindall, & Cox. 1878.

Outlines of Medicine (Aids to Medicine, Part I.) The General discases of the Lungs, Heart, and Liver. By C. E. Armand Semple, B.A., M.B., &c. London: Baillière, Tindall, & Cox.

1878.

Alcohol in some Clinical Aspects. A Remedy; a Poison. By G. Godwin Timms, M.D. London: Baillière, Tindall, & Cox. 1878.

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ORIGINAL ARTICLES.

NOTES OF A CASE ILLUSTRATING THE SIMULATION OF DISLOCATION BY OLD FRACTURE OF THE NECK OF THE HUMERUS.

BY JOHNSTONE MACFIE, M.D., GLASGOW.

(Read before the Medico-Chirurgical Society, 20th December, 1878.)

THE occurrence of the surgical case, a short account of which I propose giving to the Society, was the means of calling my attention to one or two papers, by Mr. Hutchinson, in the Medical Journals, on the "Simulations of Dislocation by Old Fractures of the Neck of the Humerus." As far as I have been enabled to judge, these papers have received little attention, and yet they appear to be valuable in gaining a clear understanding of a class of cases that, although not common, occur frequently enough to be important. When such cases do occur, and are first seen some time after the injury, without our having an accurate account of the accident and treatment, or without a knowledge of Mr. Hutchinson's teaching on the subject, a mistaken diagnosis is almost certain, and a hurtful treatment most probable.

For the use of the Notes of the case I am indebted to the kindness of Dr. May, of Tottenham, under whose care the

patient was admitted to hospital.

Wm. B. was admitted to hospital on the 4th December, 1875. He complains of a severe injury to the left shoulder, received a couple of hours before admission. He is a hale looking man;

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states that he is 66 years of age, and that he has been usually

employed as a carter.

History of Accident.—He states that while leading his horse he slipped on the frozen snow, and fell in front of the wheel, but cannot give a clear account of what happened after that. His brother, who chanced to be with him at the time, states that B. fell on his face, with his feet towards the cart wheel, that the horse moved on, and the wheel, grazing his left thigh and side, passed over the shoulder joint. The cart, an ordinary two-wheeled vehicle, was laden with a ton of coke at the time of the accident.

Condition on Admission. - There is great bruising and effusion of blood around the joint, and swelling of the whole of the arm, but no wound. Notwithstanding the effusion and swelling, a projecting "knob" is apparent on the top of the shoulder. On manipulation, this proved to be the outer end of the clavicle, from which the scapula had been dislocated; the outer end of the clavicle riding on the acromion process of the scapula. On examining further, a fracture was discovered rather high up in the surgical neck of the humerus. On manipulating deeply in the axilla, the head of the bone was found in the normal position, and, on looking at the outer side of the joint, the deltoid had not lost its roundness, although, from the altered relation of the clavicle and scapula, the left shoulder appeared lower than its fellow. The fracture already mentioned could be distinctly felt, and crepitus could be easily produced; but above its site an obscure mobility of the bone could be detected that seemed to give support to the view entertained at the time that there was either considerable comminution of the upper fragment, or a second and distinct fracture through the tuberosities of the humerus.

Treatment.—It was found impracticable completely to reduce the dislocation of the clavicle, on account of the risk of applying undue force at the seat of fracture, but by means of a pad in the axilla, and a firmly applied bandage over a pad on the shoulder, several turns of which passed down in front and behind, to a second bandage encircling the waist, the dislocation was so far reduced that the prominence caused by the outer end of the clavicle, instead of being about the size of an egg, was about the size of a walnut. A pad in the axilla, with crossed handkerchiefs, was applied in addition to keep back the shoulders, as in a case of fractured clavicle. The fracture was secured by lateral splints, the internal extending from the axilla, and with the external splint com-

manding the elbow joint ...

On the 11th, the splints and bandages were re-adjusted. There was still some swelling, and the discoloration from bruising was very great, extending down the arm and side below the level of the elbow joint. From this date the case progressed satisfactorily. On the 3rd February the splints were entirely removed, and the limb put up with a simple bandage and sling; but the crossed handkerchiefs passing under the shoulders were retained, so as in a measure to command the dislocation. As the tendency to increased displacement of the end of the clavicle disappeared, these were removed but, at the termination of the treatment, the marked prominence of the outer end of the clavicle was still quite distinct, showing that the bone had not been perfectly retained in its normal position. Although this dislocation is not the subject of special remark, we may say here that the result obtained was to be expected, for we know that in such dislocations reduction can rarely be maintained, even in cases not complicated with

On the 23rd February, B. was dismissed from the hospital. For some time previous it had been noticed that the limb was assuming almost exactly the appearances of a dislocation of the humerus, downwards into the axilla. There was distinct flattening of the shoulder, there was the feeling of a hard, thickened mass in the axilla, and the movements of the shoulder were much impaired. At this time he could barely touch his head with his left hand, and only with difficulty could he place his hand behind his back. The elbow was not certainly held away from the side, but this is not a constant sign in dislocation into the axilla.

At this time he was advised to exercise the stiff joint, and to return occasionally, so that passive movements might be

practised.

In March, B. again attended at the hospital, when the appearance of the arm and shoulder was so similar to that of an old dislocation of the humerus, that he was asked to let himself be photographed. Two of these photographs, an anterior and a posterior view, I now show you. The flattening of the shoulder is very noticeable, and many surgeons, had they seen him for the first time when the photographs were taken, would have been inclined at once to conclude that the case was one of dislocation into the axilla. If this conclusion had been come to in such a case as this, and reduction of the supposed dislocation attempted, the humerus would very probably have been fractured again, and the dislocation of the clavicle re-induced.

After this date, B. occasionally came to the hospital, the movements of the joint being for a long time impaired, but he was encouraged to exercise it, and advised, if he had a pump near his house, to use the left arm specially in

pumping.

By way of enforcing the importance of recognizing cases such as that of B., I would again refer to the notice of similar cases by Mr. J. Hutchinson, and especially to his paper in the Lancet for 1876. In that paper, as also in his lectures, published in the Medical Times and Gazette, he brings forward a number of these cases, in which the signs of dislocation were so apparent a month or two after the injury, that surgeons who saw the case concluded that it was a dislocation, and in several instances reduction of the supposed dislocation was attempted with the effect of re-fracturing the bone. In another case he was asked to give evidence in a court of justice against a surgeon for malpraxis in not having diagnosed a dislocation which was supposed to be still unreduced. On Mr. Hutchinson's making some inquiries, it was stated to him that the patient, within a month of the original injury, had been taken to a London hospital, where reduction had been attempted. seemed strong evidence that the case must be one of dislocation. On making further inquiries, however, he found that there was an entry in the books of the hospital that the attempt at reduction had been discontinued, because the bone had given way; thus confirming him in his suspicion that the case had been one of fracture from the first; the bone breaking the second time, probably, when no great amount of force was applied, as it was but a month from the date of the original injury. This particular case brings out very clearly the importance of the medico-legal aspect of such cases.

But perhaps the most instructive case related by Mr. Hutchinson is one in which a dissection of the shoulder was obtained; and it seems to have been the first to call his attention to the subject. It occurred in the person of an insane patient, who had died in an asylum. When the body was placed on the post-mortem table it was noticed that one of the arms presented all the features of a dislocation downwards into the axilla. It was then remembered that he had been treated about a year previously for fracture high up in the humerus of the same side, but as observation had not been directed to it for many months, no one knew that it had assumed any of the characters of a dislocation. On dissection it proved to be a fracture irregularly through the anatomical neck of the bone, in which union had occurred in such a manner

that the head of the bone had been forced down by the motions of the arm, and had formed an articular facet just under the glenoid cavity. Here there was no dislocation in the ordinary way, and no probability that any attempt at reduction would have been of the least service, but rather the reverse. Frequently in such fractures there is locking or impaction of the lower into the upper fragment. This, while it may render the diagnosis more obscure from the difficulty of producing crepitus, assists firm union of the parts. With regard to the effect of impaction in producing the appearances of dislocation, Mr. Hutchinson points out that frequently the fragments have not been driven together in the same line, but instead, the lower is inserted across the head of the bone, and this malposition, while assisting good union of the parts, has the effect of changing permanently the position and appearance of the upper end of the humerus, giving it more the appearance of a femur with a short and ill defined neck. From this we can easily understand how impaction and union in this way would tend, along with the atrophy of the deltoid present more or less in all such cases, to produce the flattening of the shoulder, suggestive of dislocation. We may notice, however, that in the case of B., while there was little or no displacement of the humerus in its relation to the scapula, there was certainly no locking or impaction of the lower fragment.

With regard to the treatment of the fracture; as a rule, there is very little displacement at the time of the injury, and any apparatus that keeps the parts at rest appears to do well. Mr. Hutchinson recommends a rectangular splint applied to the

inside of the arm.

In conclusion, I would say that, while we may not look at the case of B. as a specially marked example of the class referred to, it may at least prove useful in directing the attention of some Members to the subject.

Literature of the Subject:

"Notes on some rare forms of Fractures and Dislocations." By Jonathan Hutchinson, F.R.C.S. *Medical Times and Gazette*, Vol. I, 1866, pp. 247 and 303.

By the Same. Medical Times and Gazette, Vol. I, 1875, p. 115.

- "Notes of a Case in Cardiff Infirmary." By Dr. Sheen, Vol. I of Lancet for 1876, p. 211.
- "Short Paper on the Same, and Dr. Sheen's Case." By J. Hutchinson, F.R.C.S., Lancet, Vol. I, 1876, March, with cases.

ON AN IMPROVED APPARATUS FOR SPRAY INHALATIONS.

BY JAMES ADAMS, M.D.

(Read before the Glasgow Medico-Chirurgical Society, 20th December, 1878.)

It is now ten years since I read in this Society a communication on "Medicinal Inhalations, with description of an improved apparatus for the production of medicated vapours."* On that occasion I exhibited an Inhaler which was cordially approved by all the members who made it the subject of comment. That approval gave me gratification that compensated for an expenditure of much time, thought, and pecuniary outlay. The article immediately came into very general use. It was at first sold under the name of "The Adams Inhaler." but of late years, under the unrightful pretensions of a discreditable patent it was pirated, and has since been sold under the name of "Dr. Siegle's Patent Steam Spray Inhaler, with Boiler as suggested by Dr. Adams." I have two objects in bringing the instrument again under your notice. The first is, to show an improvement I have devised, that obviates certain inconveniences attendant upon the use of spray inhalers, adds to their efficiency, and lessens the cost of the medicaments employed. My second object is to show how therapeutic progress may be impeded through breach of that medical ethic which proclaims that medical men "lower their status when they attempt to establish a property in a remedy or other invention for the relief of disease, whether by concealment, or by patenting, or by advertising the invention for the benefit of its presumed owner." + For these objects it is necessary, and I think it will be interesting, that I should give a short resumé of the history of spray producers. This will enable you to accord to any actual inventor his legitimate claims.

The use of medicated vapours, or of simple steam vapour, in the treatment of diseases has been practised from the earliest times. The dispersion of liquid medicines, in the form of a fine mist or spray, to which the term "pulverizing," or "atomizing," is generally applied, is also an old practice. On a large scale, and by means of arrangements restricted to establishments located in certain watering places on the Continent, it has been

many years in use.

^{*} Published in Glasgow Medical Journal, March, 1868.

[†] Dr. Gairdner On Certain Moral Aspects of Money Getting. MacLehose, Glasgow. 1868.

In 1858, a medical man named Sales Girons, of Pierrefond, in France, constructed "a portable apparatus" for the pulverization of fluids containing dissolved medicaments, whether volatile or non-volutile, for the purpose of inhalation in the treatment of disease. After that date, numerous medical men throughout Europe contributed their ideas and aided the construction of various contrivances for the more effective carrying out of the principle of pulverizing fluids. admittedly a valuable principle in the treatment of disease, and every approach to efficiency and economy in its application has been welcomed by the medical profession. The apparatus of Sales Girons consisted of a force-pump projecting a very fine jet of fluid. The stream at the moment of exit struck upon a metal disc, and was scattered and broken up into a fine mist or spray. Numerous modifications of the instrument were quickly in use, but all essentially acted on the same principle —viz., the striking of a stream of fluid against an obstacle.

In 1859, M. Mathieu, of Paris, contributed a new idea for the mechanism. He exhibited an instrument in which the medicated fluid escaped slowly, drop by drop, into a tube through which passed a blast of compressed air. The fluid was thus projected forcibly through the fine open end of the tube in the

form of a very fine, but very cold spray.

In 1862 a more important change was effected by Dr. Bergson, of Germany, who, in accordance with a suggestion of Dr. Natanson, constructed an instrument which he called "Hydrokomion," or "Water Dust Apparatus." He made use of the motive principle exemplified in Gifford's Steam Injector, as used in feeding engine boilers. In that contrivance a forcible jet of steam is led into a pipe, one end of which dips into a reservoir of water and the other end dips into the boiler. The steam jet produces a suction which exhausts the air in the pipe, and the water in the reservoir is then by atmospheric pressure forced up into the pipe so exhausted of air, and is caught by the rush of steam and projected into the boiler. Dr. Bergson followed out this principle. He employed two glass tubes, the capillary openings of each meeting, and being held at right angles with the other. The free end of one tube dips into the reservoir of fluid to be pulverized, while the free end of the second tube is attached to an india-rubber pipe with two india-rubber balls, one of which, when compressed by the hands, drives a current of air in the manner of a bellows through one tube. The air escaping at the point where the two tubes meet at right angles, causes a vacuum in the tube that dips into the reservoir, the fluid from which

ascends through aspiration exactly as in Gifford's injector, and is blown into a fine spray. He thus produced a perfect and convenient apparatus, usefully employed at the present day. In some works, as Morell Mackenzie's, and also by some English instrument dealers, it is erroneously called Dr. Andrew Clarke's Spray Producer; and, with the points of the tubes tipped with gold or silver, it was patented as "Dr. Dewar's Patent Spray Producer;" but, as I have already stated, the instrument in its completed form is entirely the invention of Dr. Bergson. Dr. Richardson's spray producer, for the local application of ether, has the pipe fashioned precisely after the manner of Gifford's steam injector, and is also the legitimate

outcome of Dr. Bergson's idea.

In the same year that Dr. Bergson effected this most important and suggestive improvement Dr. H. Waldenburg, a German physician, constructed an instrument, and published its description in the Allg. Med. Central Zeitung, No. 42, 1862. In this apparatus he introduced the use of steam as the motive power. He employed a spirit lamp to generate steam in a glass boiler, to which was attached a tube conveying the jet of steam which met and mingled with a fine jet of medicated fluid projected from another apparatus attached or brought into connection. He thus produced what he termed "fog vapour." Dr. Waldenburg described at the same time an apparatus, the idea of which was communicated to him by the chemist, Dr. G. Reichenheim, whereby, in the same instrument, steam and medicated spray were produced at one and the same time. The instrument consisted of a glass boiler in which the medicated fluid is placed and heated by a spirit lamp. A bent glass tube is inserted through the cork of the boiler, and passed to near the bottom of the vessel. The tube is made wide at the lower part and tapers upwards to a very fine capillary point, and the portion of the tube outside the boiler is bent at a right angle in a horizontal direction. As the steam is generated in the boiler it presses on the medicated liquid and forces it upwards in a fine stream through the capillary point of the tube, where it escapes in the form of a combination of spray and steam. necessary, for the more effective pulverization of the spray, nothing remains, he says, but to place some resistance to the stream at the point of its escape.

Such was the position of this therapeutic agent, originated by Sales Girons, and built up by the unselfish labours of medical men, when, in 1863, Dr. Siegle, of Stuttgart, adopted the idea recently made public by Waldenburg, of producing medicated spray in combination with steam and through the motive power of that principle. He employed Waldenburg's glass boiler, heated in like manner by a spirit lamp for generating the steam, and he made use of Bergson's tubes, inserting that tube designed to convey the steam through the cork of the boiler precisely as described by Reichenheim, the other tube dipping into the reservoir of medicated liquid as in Bergson's apparatus. Dr. Siegle describes his instrument in a work published at Stuttgart in 1864 (A. Kroner, publisher), and to the extent that it effects the objects of combining previous arrangements and suggestions he is entitled to a share of credit among other improvers of Sales Girons' invention. He did not, however, as is too commonly supposed, pretend to have discovered the principle or to have originated the mechanical contrivances; for the principle and the contrivances alike were, as I have shown, in common knowledge and in familiar use. He at first only claimed merit for the material of which the instrument was constructed, and for the arrangement or form of its parts. Thus, he claimed an instrument the essential parts of which were (a) a boiler made "entirely of glass;" (b) the addition of "a brass screw" to the ordinary spirit lamp so as more readily to raise or lower the wick; (c) the attachment of a Collardeau's thermo-barometer within the boiler, and inserted through a hole in the india-rubber stopper; and (d) a metal case or jacket completely surrounding the entire apparatus with the object of lessening the danger from fragments of glass when the anticipated occasional explosions did This is the actual sum and substance of Siegle's patent, as carefully specified and claimed in his Letters Patent.

Under ordinary circumstances it would be ungenerous to criticise with severity any contrivance for the relief of suffering humanity, especially when designed by a medical man, but Dr. Siegle patented, for his exclusive personal benefit, his attempted combination of other people's ideas, in this respect differing from all his predecessors. It is, I presume, generally known that neither merit nor originality are necessary for securing the privileges of a patent, and, therefore, it was open to Dr. Siegle, or to Brown, Jones, or Robinson, to take out a patent for any novelty introduced into this country from abroad, irrespective of who the actual inventor or constructor might be. Dr. Siegle accordingly availed himself of this peculiarity of the law of patents, and, in due time, he sold, or for some other consideration assigned, this patent of questionable merit to certain instrument makers. These tradesmen straightway fastened upon the developed idea of Sales Girons, to which so many unselfish minds had substantially contributed, and made "Dr. Siegle's patent" a pretext for frightening away other makers, and for years grasping exorbitant prices, to the public injury, through a most undeserved monopoly of manufacture.

I trust to your includence if I enlarge a little on the subject of patenting in the present connection; for the instance I am discussing illustrates several of the evils resulting from a violation of the medical ethic I quoted in my opening remarks. By patenting the contrivance under consideration, professional status was lowered and a public injury inflicted. Passing from the first evil, which does more than personally affect the patentee, inasmuch as it reacts injuriously upon the social standing of the profession as a body, it is easy to show that the exorbitant prices charged have been a public injury. An inhaler, i. e., a recognized therapeutic agent, is not an instrument by the use of which individuals carry on their occupation, or in any manner recoup their outlay by securing a pecuniary return. It is an instrument designed for domestic use on occasions of suffering and sickness to which common humanity is subject. It is a means or agent by the use of which medical men have satisfied themselves that the lives of their patients may often be preserved, health often improved, and suffering often mitigated or entirely prevented. It is an instrument frequently required on emergency, and its use is often a necessity. high price is therefore a public calamity, and a price artificially heightened by a monopoly is a public injury. It has been abundantly demonstrated that several adjuncts of Siegle's patent were not only not necessary, not only superfluous, but were positively injurious, and practically obstructive to its usefulness; that they not only unduly increased the cost of production, but actually hindered the efficient carrying out of the principle for which the instrument is designed. When to these wasteful additions to the first cost there is superadded the arbitrary royalty of a patentee, there is inflicted a direct injury to the invalid whose means debar him from the attainment of a necessary remedy. A disheartening barrier is also interposed between the knowledge of the remedy possessed by the physician, and the agencies which, if available, would give effect to his knowledge. And still further, there is a formidable obstacle set up against further improvement, for the physician and tradesman alike are discouraged from attempting improvements, economical or otherwise, that are liable at any moment to be stifled by the over-riding pretensions of a patentee, and by his threat of vexatious and costly law proceedings. eminent author has truly said that "to put a check on the reproduction of that which mankind find to be valuable, useful, pleasureable, is to put a check on human progress." (Farrar.) In point of fact, however, Dr. Siegle's attempted monopoly of profit, out of other people's ideas, was not at first remunerative to him, for his combination proved so clumsy, complicated, and dangerous, as to be practically unworkable and commercially unsaleable. Dr. Lewin, professor of surgery, at Berlin, published almost immediately a trenchant criticism of its defects. He graphically pictured a timid invalid using the inhaler, sitting with head thrown back, and mouth wide open, according to directions; his goggling eyeballs intently rivetted on the column of mercury in Collardeau's alarm barometer "as it oscillates between the danger point 1 and 2," while with outstretched hand, grasping the screw of the spirit lamp, he holds himself ready "when the danger height is exceeded" to instantly screw down the lamp. He showed that the outside metal case is insufficient to protect against the anticipated explosions of the glass boilers, because that the door of the case must be left open to permit the screwing down of the lamp, and also to admit air to the lamp itself, which otherwise could not burn. Fragments of glass would certainly, therefore, be projected through the open door of the case when explosions occurred. Dr. Lewin further showed how crude, and practically unfit, was the total construction of an instrument not intended for the hands of individuals accustomed to careful chemical manipulation, but, on the contrary, for the familiar, daily or hourly use of the sick chamber, in the hands of feeble, nervous invalids, their nurses, relatives, or domestic servants. Dr. Lewin insisted that the appalling alarm barometer should be at once done away with, and a safety valve substituted, that the boiler, instead of glass, should be made of strong metal not liable to explode, that the cork or stopper of the boiler, instead of india-rubber tied down every time the apparatus was used with wire or strings, after the manner of champagne bottles, should be made of metal with a screw collar, &c., &c. Other critics corroborated and supplemented Dr. Lewin's criticisms. They showed that the glass boiler was additionally liable to getting broken on account of its faulty shape—viz., a flat bottom with angular sides, a shape that is practically discarded from laboratories on account of liability to fracture at the angle of the bottom. In short, the judgment of the profession and of the public was so adverse on the very points for which Dr. Siegle claimed merit that the makers quietly abandoned, one by one, the distinctive characters of the instrument, and as quietly took up the new suggestions. Nevertheless, through

every modification, it remained an unshapely, complicated, inconvenient, and dangerous combination of disjointed material that was sold at 63s. in its best form, a cost that placed it

beyond the reach of common use.

Such was the existing condition of the most improved Spray Inhaler when, in 1868, I designed the instrument which I then exhibited to you, and to which, in an improved form, I trust you will hold me justified in again directing your attention. When contrasted with Siegle's Patent Inhaler, it is seen that the two instruments could scarcely differ more widely either in material or in construction. And when I point out wherein they differ you will better appreciate those arrangements by which I have secured the greatest efficiency, conjoined with smallest cost, in carrying out Sales Girons' original conception. And here let me remark that the essence of his invention is the fact or idea that is embodied in it, and not the form or dress in which it is exemplified. His idea should never have been made a matter of property. No man can reasonably claim a right of property in the idea of employing any of the natural forces, such as wind, water, steam, or electricity. But he may justifiably do so with reference to the dress or form in which the idea is illustrated. That alone deserves protection. And if Sales Girons, or any of his respected coadjutors, had been imbued with commercial cupidity instead of professional sentiment, they could reasonably and honestly only have claimed merit and protection for the precise form of instrument with which they carried out Sales Girons' idea. To the credit of the profession, however, none of the other gentlemen I have named ever endeavoured to establish a right of property in Sales Girons' invention.

In Siegle's Patent Inhaler, which I now exhibit, the form of boiler is spherical, with a flat bottom. It is that known as the ordinary land boiler, consisting of one large mass with a great quantity of water in the centre. The heat is applied exclusively to the bottom, with the result that the water is evaporated at a low temperature, and the steam that is formed has the least degree of elasticity or force. It is called a low pressure boiler. The steam being produced at a slow rate of development, the medicated liquids cannot possibly be pulverized or rarefied so minutely, projected so forcibly, or the spray maintained so uniformly as when steam is used that is formed in a high pressure boiler. When there is—as in the present case—no water line or other guage for regulating the quantity of water originally placed in the boiler, and for preventing overfilling, there is great liability to several serious accidents.

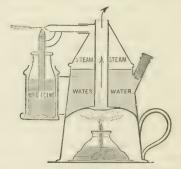
Thus, as explained by Donnè, when water has been deprived by heat of that portion of air which it normally contains, there then occurs a capricious variability in its capacity of expanding and of generating steam. In practice, this annoying and dangerous peculiarity cannot be readily regulated, and hence a vessel of boiling water will now and again boil jerkingly and boil over; hence also a safety valve will frequently be seen in action, fitfully and intermittently. For want of a water line, the boiler in Siegle's Inhaler occasionally gets overfilled, andowing to the cause specified—it boils over, or "primes," as it is technically called, and the water flowing over through the steam escape is projected forcibly in the face of the patient. It was from witnessing this accident frequently, that I was first led to make efforts in the way of improvement, for I found that it required much persuasion on the part of the physician, and considerable nerve on the part of the patient, to face Siegle's Patent Inhaler after one or two experiences of this nature. The liability to accidents through scalding was further increased by the angular shape and great length-43 inches—of the steam escape pipe which rose vertically from the top of the boiler, and was bent at an acute angle in a horizontal direction. The low pressure steam, as it passed sluggishly through this long angular pipe, got cooled and condensed, and the drops collecting at the angle were forcibly spirted in the face of the patient. The faulty shape of the patent boiler was aggravated in the attendant results by the faulty material of which it was composed, i.e., glass. For when water is boiled in a close, or nearly close vessel, the quantity of steam generated is often suddenly doubled, and consequently the capacity of the containing vessel is suddenly subject to a double strain. The choice of a glass boiler, with a securely fastened stopper, was therefore a very faulty and ignorant choice, for glass is an imperfect conductor of heat, and cannot withstand sudden expansion or contraction. Hence the explosions which, singularly enough, were anticipated, and which actually occurred, notwithstanding the assurance of the maker (F. Mollenkopf, of Stuttgart), that each glass boiler was carefully tested under a pressure of two atmospheres, or four times greater than, in his opinion, was necessary, for the force of steam required for pulverizing fluids. The suddenness of the expansions and contractions I have referred to had not been taken into account, or were insufficiently understood and appreciated.

I need not continue this depreciatory criticism of the many practical defects I might enumerate in the fabricating of this

crudely fashioned patent instrument.

190 Dr. Adams—Improved Apparatus for Spray Inhalations.

I will now refer to some of the merits which I claim for the model constructed by myself. First, it is entirely made of tin, and therefore strong; it is very portable and compact, and therefore easily handled and not readily disarranged. Second, it is sold by the retailer at 5s., a price that, while a mere fraction of the charge formerly exacted, is within fair limits of a physician's prescription and of an ordinary patient's means. Third, the boiler is markedly distinctive, and has many advantages. It is of tubular construction, and its expanded bottom and central flue present a large surface for the application of heat, the rapid and plentiful generating of steam, and—what is of even greater moment—the drying, or rarefying, or superheating of the steam after it is generated. For the central flue, which passes through the boiler and provides a chimney to the spirit lamp, also carries the flame with a sharp draught, and consequently with an intensified heating power through the steam chamber. The steam collecting in this chamber is, at the instant of escape, brought by the conical-shaped top into close contact with the central flue, and is thus superheated and dried, and delivered in a more elastic condition, thereby ensuring a more effective pulverization of the medicated fluid. By carrying the flue of the lamp through the centre of the boiler, excessive heat is diverted from the outside where such heat would be inconvenient, and therefore, a handle which is



SECTIONAL VIEW OF DR. ADAMS' INHALER.

attached to the lower and cooler part of the instrument can be grasped with comfort and safety, even when in use. The position of the water inlet at the side of the boiler, instead of the top, prevents overfilling, and at the same time provides a water line and a defined steam reservoir. Fourth, a common cork acts as stopper to the boiler, and is a perfectly sufficient substitute for the alarming looking and costly safety valve

that Siegle had adopted after suggestion from without. Fifth, the steam escape pipe is only 1 inch long, has no angles—consequently does not cool or condense the steam—and scalding accidents never occur.

There are other details of minor importance which in their

combination make the apparatus more convenient in use.

The cordial approval which attended the first exhibition of the instrument in this Society was followed by such approval on the part of the public that it has since virtually superseded all other instruments in the market. A patent for myself had been pressed upon me, but my ideas on the subject of medical patents were those I have already expressed. As, however, I had found disappointment and annovance owing to my patterns and directions being departed from by workinen who did not understand what I was aiming at, I gave over whatever right of property or patronage I might possess to a respectable member of the drug trade,* who undertook, and most faithfully carried out, my wishes in the manufacture. stipulated only that the article should be sold at the lowest possible remunerating price, and that in associating my name with it—as a distinctive name was considered necessary for commercial purposes—it should be intimated that I had no interest whatever in the sale. Under these arrangements, the apparatus soon came to be manufactured by the thousand, as well for home supply, as for exportation to the Colonies and to foreign countries.

And here occurred a singular episode in its history. With an amount of honesty I leave you to estimate, with no courtesy, but with a most flattering appreciation of my labour, the manufacturers of Siegle's Patent Inhaler dropped their unsaleable merchandise, and pirated my model. Indeed, it is very well understood that no specimen of Siegle's Patent Inhaler, in its original form as patented, and few, if any, of the modifications actually existing at the date when I introduced my

apparatus, have since been manufactured.

"Siegle's Patent" was the name given to the first instrument which appropriated the credit, and created a right of property in the original conceptions and philanthrophic labours of Sales Girons, Waldenburg, Reichenheim, Bergson, &c., &c., and "Siegle's Patent" continued to be impressed as a false legend on the modifications which quickly followed the criticisms of Professor Lewin and others. This practice was pursued in face of the fact that, in almost every instance where a new suggestion was appropriated, some distinctive

^{*} P. Harrower, Druggist.

specialtè claimed in the patent, was at the same time quietly abandoned. Thus the impracticable and dangerous glass boiler—specified as the grand feature of the patent—had been given up, and the suggested substitute of a strong metal boiler adopted. The outside protection of a metal jacket had been given up, having proved useless at the best, and no pretext for its continuance any longer existing. The screw for regulating the flame of the common spirit lamp, so carefully specified as essential, had been given up as in no way necessary. Collardeau's thermo-barometer had been given up in favour of a suggested substitute—viz., a costly, useless, very unworkable, and alarming safety valve.* The dangerous and troublesome india-rubber stopper, tied down securely with strings and wires, and requiring to be opened up every time the instrument was used, had been given up for a metal stopper with a screw collar, and so it was with other details I need not enumerate. But through all changes, the assumption of property rights under the pretext of Patent rights was asserted. And now my model, which had cost me so much in time, thought, and money expenditure, was laid hold of in its entirety, and with its adjuncts to the wooden packing case, the printed directions, the sale label, the woodcut illustrations, all were barefacedly pirated, and with the characteristic shameless consistency, stamped "Siegle's Patent." Indeed, I am informed that certain electrotype blocks, prepared to illustrate my apparatus, and which had been supplied for that purpose to an advertising printer, went amissing, and were afterwards traced by a microscopic examination of letters, lines, and figures, as having been used, actually, or by a transfer, to illustrate "Siegle's Patent."

> "For this is law, I will maintain, Until my dying day, Sir, That whatsoever King may reign, I'll be the Vicar of Bray, Sir."

While restricted to the actual apparatus devised by Dr. Siegle, there is no fault to be found in the association of the

^{*} I exhibit one of these boilers with "safety valve," which was tested for me by a mechanical expert. The valve only began to yield at a pressure exceeding 70 lbs. on the square inch. Long ere that pressure could have been reached in ordinary use, the boiler would have burst, or the escape pipe, followed by the scalding water, would have been blown out in the patient's face. With so little true mechanical knowledge had suggested improvements been applied. This valve was adhered to in the Patent instrument, until by my model I had proved it to be wholly unnecessary.

name with the article. It is commercially convenient, and it awards due merit. The name of a medical man may as legitimately be applied to an article as to a disease. Thus we speak of Bright's disease, and of Colles' fracture, and we ask at the instrument maker for M'Intyre's splint, Syme's abscess lancet, or Buchanan's rectangular staff. The names are here employed in an honourable connection. Such men find their sufficient reward in the consciousness of having made a useful addition to our remedial agents, the stores of which they desire to be common to the uses of medical science. But there is no analogy between the honourable connection in which these names are spoken and that connection in which "Siegle's Patent" is stamped upon my model, as a symbol of merit and of exclusive right of property, to cover an act of shameless

plagiarism and spoliation.

The only point not slavishly imitated by Dr. Siegle's assignees was in the matter of cost. That was immediately raised 50 per cent above the price which had been proved to be fairly remunerative. If "Dr. Siegle's Patent" had not hitherto been a commercial success, it now yielded a rich harvest.* For the profits upon the trade created by my apparatus were now transferred to the pockets of Dr. Siegle's assignees, and these profits were supplemented by levies made upon the principal druggists throughout the kingdom. To avoid threatened law proceedings for alleged infringement of Dr. Siegle's rights, many respectable tradesmen were glad to compound for sums of £20 or thereby. Dr. Siegle's professional brethren were also made to pass under his yoke. Thus, Professor Lister was mulct in heavy "royalties" for having used, and for permission to employ, an enlarged form of the apparatus for hospital use, for the production of antiseptic spray in the dressing of wounds.+

^{*}The profitable trade thus appropriated may be inferred from the experience of a single retail house. Messrs. Hilliard, of this city, before the introduction of my Inhaler, found that a supply of half-a-dozen of "Siegle's Patent" laid in at the beginning of the year kept them abundantly in stock. But my model was ordered in quantities of six dozen at a time, and they feel safe in stating that the trade was not merely doubled or quadrupled, but that it was 40 times increased. Meanwhile, the sale of Dr. Siegle's Patent entirely and speedily ceased, my model being substituted and sold under that name.

[†] In the discussion which followed the reading of my communication, various speakers gave corroborative evidence, from their personal knowledge, of the great obstacle, and at times the actual hindrance to the use of my cheap model, caused by the pretensions and exactions of the assignees to "Siegle's Patent." Thus, it was stated by Dr. Thomas, Medical Superintendent of the Royal Infirmary, that a royalty of £2 for each apparatus was

From such modes of levying "black mail" a considerable sum altogether must have been collected at this time. Meanwhile an application was made in Glasgow to have my maker interdicted from manufacturing the apparatus, on the plea that it infringed "Dr. Siegle's patent." But the assignees were unable—or wisely declined—to show an instrument made after the patent specification, and the late Principal Sheriff Dickson, after examining and comparing those instruments they actually did make with mine—after examining the specification, and after hearing parties, refused interdict; saying, "he could not see even a colourable resemblance," so widely did the specification, as well as the articles hitherto manufactured, differ from my apparatus. But the matter did not end here; for, as in giving evidence, I had distinctly repudiated any personal interest or claim, the admission made an opening for a renewed application, under the pretext, so far as I recollect, that if Dr. Siegle could not show right to the material and construction of the new model, he was entitled, at least, to the exclusive use of steam in any apparatus used for spray inhalations. I have already shown that he had no more to do with originating this suggestion than with that of the telephone. But this fact was not sufficiently known in this country at the time; and, moreover, it was considered necessary by the law agents that I should permit my name to be used in any further law proceedings, as well to vindicate the public right as to prevent the appropriation of my model as was now the suspected intention. It was a painful alternative, but I could not compromise my position as already explained. Therefore, as the maker of my apparatus could not claim as his own invention, he could not show right to defend the action, and interdict was granted against him; and, as I positively declined to interfere in any way, Dr. Siegle's assignces had the field to themselves. They appropriated my apparatus as already stated, and have enjoyed the profits of the coveted monopoly of manufacture till the present time when the Patent rights have expired.

I ask your forbearance for the time occupied in this digressive episode, but it is part of my argument in illustrating the ungenerous and mischievous bearing upon therapeutic progress, of a medical man, patenting and monopolizing for his personal

advantage, a therapeutic agent.

levied upon the hospital for permission to use the enlarged form of the instrument devised by Professor Lister; and Dr. Clark stated that the increased price exacted on the ordinary instruments had hindered and in great measure "stamped out" the use of the inhaler in the large Belvidere Hospital.

Before leaving Dr. Siegle and his assignees I must refer for a moment to the mechanical notions, or rather to the want of such, manifested throughout every modification of apparatus that they have adopted or "appropriated." It is said of Goldsmith, that he touched nothing he did not adorn, but of Siegle's assignees it might be said, that they touch nothing they do not spoil. After sticking closely to my pattern for a considerable period, they have endeavoured to improve upon its shape, and they have altered the conical top of the boiler for a rounded dome. This lessens in a trifling degree the manufacturer's cost, and, consequently, increases his profit, the retail price remaining unchanged. But it misses the objects I had in view in devising the conical top—viz., the drying, and thereby increasing the elastic force of the steam at the instant of its escape, and also of preventing the risk of "priming" of the

boiler, or of lodgment of wet steam in the escape pipe.

And now, after the fashion of a lady's letter, the pith of which is in the postscript, I come to the more novel and practical portion of my communication. A very annoying incident has hitherto attached to the use of the spray inhaler. spray scatters over the face, eyes, and dress of the patient, and of his bed clothes when in bed. A separate apparatus, consisting of a screen with a hole in the centre, mounted on a support, and having a vessel to contain the condensed spray as it trickles down, has been recommended, and is occasionally employed; and a funnel shaped screen of card board, or of stout paper, or other material, held in the hand, is frequently employed. But in practice the use of even the best of these make-shift contrivances, setting aside the extra cost, is insufficient to prevent annoyance. There is difficulty in adjusting the stand-mounted screen so as to save the patient from a strained position, particularly while in bed. The vapour, moreover, does not always get through the hole in the screen, but is caught at an angle and deflected with every movement of the hand or face. There is a further annoyance caused by the vapour that is intercepted by a hand screen becoming condensed on the screen, and from thence trickling down upon the bedding, or upon the table, if the patient is out of bed. I have found these inconveniences to be substantial drawbacks to comfort and efficiency in the use of spray inhalers, and I have devised a remedy. This consists in a light tin funnel about 5 inches long, 3 inches wide at one end, and three-fourths of an inch at the other. A narrow slip of tin soldered to the wide end of the funnel, and sliding into a groove on the body of the inhaler in front, places and keeps the funnel in a horizontal position. This addition to the

inhaler, which I will call the "face protector," conducts the spray projected through the wide end of the funnel, while the narrow end is placed within, or close to, the patient's mouth. The wide end of the funnel is partially enclosed at its lower edge for about a fifth part of its diameter, thereby forming a cup or receptacle for collecting the spray that condenses within the funnel, and which would otherwise have been dissipated and lost. The protection afforded by this little arrangement is so complete, and its other advantages so decided, that I cannot



DR. ADAMS' INHALER WITH "FACE PROTECTOR."

doubt it will be found attached to the next edition of "Siegle's Patent." The apparatus is subject to no disarrangement in whatever position it is handled, and the vapour is directed fully and fairly into the mouth or nostril of the patient as may be desired. The face protector is attached or detached with instant facility, so that it is no obstacle when the physician desires to avoid a concentrated medicinal inhalation, as in the case of infants, or of sleeping invalids. Besides protection to the face, it acts as a "spray economizer," and that in two modes. Through experiment I have found that a

larger proportion of the medicinal vapour is conducted into the mouth of the patient, and actually inhaled during its use. Further, that portion of the spray which, under previous conditions became dissipated and lost, is now collected, and may be used to dilute subsequent inhalations. The condensed and collected fluid has, of course, become weaker through dilution with watery steam. But the extent of this dilution is readily ascertained, and, on an average, the collected fluid may be taken as half the original strength. Knowing this fact the patient may regulate the after dilution of his medicine, using the collected spray instead of plain water. I am assuming that inhalation medicines are ordered in a concentrated form, by other physicians as by myself, out of consideration for the pocket of the patient.

To my thinking, this little appendage to my inhaler will prove so useful that it will henceforward be considered essential to the completed instrument. I am gratified to learn from the manufacturer* that the actual manufacturing cost of the addition is so trifling, on account of the large scale on which the instrument is being made, that he means to make no

addition to the selling price.

I have to apologize for the length of this communication. Some adverse influences have left me no time to make it shorter. I intended to have made it more usefully interesting by including some practical hints, drawn from my experience, which, in this connection, is somewhat exceptional. This would have led me to speak of remedies I have found useful in dealing with certain forms of chest and throat disease, and also of that troublesome affection ozena, which I have found in several recent instances capable of being greatly relieved. For these intentions I may find another opportunity, and, meanwhile, I trust I have shown to your conviction, and as I further hope, with some measure of your generous sympathy, that to other agencies than "Siegle's Patent Inhaler" may be attributed some share of merit in extending the practice and illustrating the benefits of Sales Girons' admirable therapeutic invention.

^{*} P. Harrower, Druggist, 136 Cowcaddens Street, Glasgow.

CASE OF TUBERCULAR PERITONITIS, ENDING IN RECOVERY, WITH A CHART SHOWING THE TEMPERATURE AND TREATMENT DURING ITS PROGRESS.

BY ROBERT W. FORREST, M.D., GLASGOW.

(Communicated to the Glasgow Pathological and Clinical Society, 14th January, 1879.)

ROBERT C., et. 18, a warehouseman, was seized with pain in the abdomen somewhat suddenly, one forenoon, in the middle of February, 1878, when at work. He went home and had some domestic treatment for a day or two. I saw him for the first time on 18th February, he was then suffering from subacute peritonitis. Three days later, with rest, poultices, and small doses of opium, he seemed well, and continued so till the 26th, when the pain in the abdomen returned, and the disease assumed the character which it retained all through the illness.

A few weeks prior to this he had an attack of boils on the neck, and these were followed by enlargement of several of the lymphatic glands on the left side of the neck; he was, however, quite able to attend to his work till the attack of abdominal

pain in the middle of February.

It seemed clear that the case was one of peritonitis,—from the presence of fever, from the existence of abdominal pain, and from the communication of a sense of friction to the hand on carefully moving it over various parts of the abdomen: and the following considerations have led me to regard it as tubercular-1st, The family history; one child of the same parents had died of "water in the head," one of bronchitis, and another suffers from bronchitis, while of the family, by a different mother, one had died of phthisis, and one suffers from chronic bronchitis: 2nd, The great duration of the illness; the patient was confined to his bed for more than four months: 3rd, The prolonged hectic fever; the temperature rose to a febrile height in the evenings, and fell to about the normal in the mornings, often accompanied by profuse sweating; and further, as pointing to the diagnosis of a tubercular complaint, may be mentioned the occurrence of a great increase in the size of the enlarged glands in the neck, and the supervention of an attack of pleurisy with friction in the left side of the chest. (See Chart, May 15).

Other complications in the course of the illness were an

attack of acute headache, attended with constipation, extreme nausea, incessant retching, which never relieved the sickness, and accompanied with depressed temperature slowly recovered from (see Chart, "cerebral symptoms"), and also the occurrence of pain and extensive induration in the left ilio-lumbar region, beginning 21st April, and only finally disappearing with com-

plete convalescence.

The drugs chiefly relied on during the earlier part of the illness were quinine, combined with opium and digitalis, in varying doses according to the amount of pain and fever; when sickness and irritability of the stomach prevented their use, minim doses of tincture of aconite were given instead; and pills of atropia and morphia were taken in the evening with complete relief to the sweating when it became troublesome. Tincture of the perchloride of iron with solution of the chloride of calcium, was given during convalescence. Poultices of linseed meal with mustard, mild blisters, and latterly, tincture of iodine, were applied to the abdomen and side, over the pained and indurated parts. Cod liver oil could never be taken, neither could new milk; the lad, from a child, had an aversion to milk, and although, to please me, he tried over and over again, he never could use it; the feeding of the patient was thus more than usually difficult. About the middle of March the fever began to have an upward tendency, and an attempt was made to control it by giving 7 grain doses of quinine three times daily. No decided effect was produced by the quinine. On the 20th March, salicin, in 20 grain doses, was tried, a dose being given in the afternoon when the temperature began to rise. and every two hours after, so long as the febrile exacerbation continued. This remedy also failed to check the evening rise to any appreciable extent, although aided by the addition of digitalis and Dover's powder after the second day of its employment. At 7 p.m. on the 21st, the thermometer recorded 101°, and on the 22nd 103°, the total quantity of salicin taken on these days was not noted. On the 23rd, 60 grains were taken, and the temperature reached 100 8 at 6 p.m. On the 24th, 120 grains were taken, and, notwithstanding, the temperature reached 102°.5 at 6 p.m. At 8 a.m. next day the thermometer stood at 102°, by 10°30 a.m. it had fallen to 98, and this fall corresponded with the onset of what I have designated "cerebral symptoms" in the Chart.

The question may here be fairly raised as to whether the cerebral symptoms and accompanying depressed temperature were not due to the large quantity of salicin taken, the administration of which was continued up till the 25th

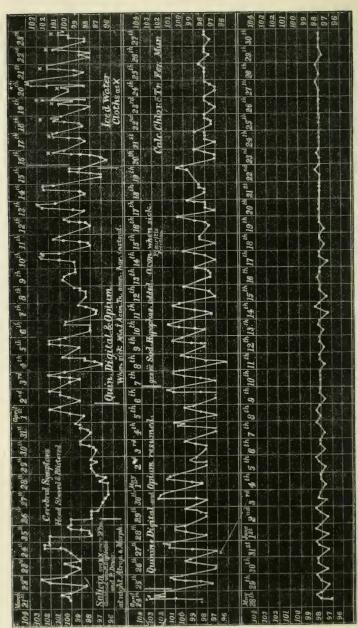


CHART OF TEMPERATURE, SHOWING RECOVERY FROM TUBERCULAR PERITONITIS. ROBERT C., ÆT. 18.—ILLNESS BEGAN IN MIDDLE OF FEBRUARY

March, but it seemed to me that the salicin was not the cause, and that the symptoms were those of meningitis. Dr. M'Lagan (Lancet, 1876, vol. i, p. 384), says he has never found the least inconvenience follow the use of salicin. I have noticed only one case recorded—viz., that by Dr. H. Weber (Lancet, 1877, vol i, p. 92), and a doubtful one by Drs. Gemmell and Shearer (Glasgow Medical Journal for October, 1877, p. 436), where serious symptoms followed the administration of salivin. In Dr. Weber's case, in addition to collapse, there was delirium, vomiting is not spoken of. In Drs. Gemmell and Shearer's case there was delirium, with high fever, vomiting is not mentioned. Dr. Murchison records a case (Lancet, June 16, 1877) of enteric fever treated with salicylic acid, in which there was acute delirium and almost total suppression of urine. I have myself seen delirium accompany the use of salicylic acid or its salts both in acute rheumatism and in enteric fever: but in this lad's case there was no delirium, the headache was general, not chiefly frontal as when caused by salicin or salicylic acid, and the sickness continued for many days, instead of passing off when the administration of the drug was discontinued.

In the middle of April, iced water cloths, prepared and applied in the way recommended by Dr. M'Call Anderson, were had recourse to in the hope that they would control the evening pyrexia (see Chart). They were used for about half an hour at a time, once on the 16th, 17th, 18th, 21st, 22nd, and 23rd, twice on the 19th and 24th, and three times on the 20th. On the latter date the first application was followed by a fall from 100°6 to 98°5, the second by a rise from 103°5 to 103°8, and the third by a fall from 104° to 103°8; two hours later (at 10:30 p.m.) the thermometer recorded 104°. On the 19th and 24th, the reduction of temperature was more decided. but only temporary. On the other days the fall was either very little, or the tendency to rise was merely kept at bay.

The highest temperatures observed during the illness were while the iced water cloths were being used, and the development of the inflammatory exudation in the left ilio-lumbar region occurred at the same time; most probably, however, they were both merely the pathological outcome of an exacerbation of the disease, just as the cerebral symptoms and depressed temperature three weeks before, were most likely the outcome of a similar exacerbation, the pyrexia preceding which I attempted to control with salicin.

ON A CASE OF MINER'S NYSTAGMUS.

BY J. CRAWFORD RENTON, M.B.

(Read in the Medico-Chirargical Society, 20th December, 1878.)

ROBERT LINDSAY, set. 23, Wishaw, a miner, came to the Eye Infirmary as an out patient on 3rd December, 1878. Patient states that six months ago he noticed that lights on the streets quivered, especially those at a distance, and this unsteadiness has gradually increased until all objects tremble whenever he looks at them. He has been a coal miner for seventeen years, and for ten of these lay on his side while working. He has always been a healthy man, and there is no history of rheumatism in his family. He sees No. 4 of Jaeger's types with either eye, but cannot read owing to the moving of the letters. On examination, his eyes were observed to oscillate to the right and left and upwards with great rapidity, more especially when the patient looks steadily at any object. The oscillation continues when he looks upwards, but when he directs his eyes downwards it almost ceases. Ophthalmoscopic examination shows the fundus in both eyes to be normal. He was recommended to cease working on his side, and to take internally 5 drops of tinct, of hyoscyamus and belladonna thrice daily.

December 23rd.—Has now so much improved that he can read comfortably, and he is only annoyed with the movements

when looking steadily at any object.

Dr. Livingstone, of Wishaw, wrote me that he had had under his care cases of nystagmus similar to that above detailed. In the particular form of nystagmus occurring in miners, an example of which I have shown, the movements are a combination of oscillatory and rotatory effort, being produced by the spasmodic action of the superior, external, and internal recti, and oblique muscles. Ever since Dr. Paul Schroeter's paper on "Nystagmus in Miners" appeared in the Klinische Monatsblätter für Augenheilkunde for 1871, the attention of ophthalmic surgeons has been turned to the disease, but previous to that (in 1867) Mr. Gillot, a surgeon in Sheffield, mentioned having observed several cases, and used, with success, an operation to which we shall refer. Meyer, in his work on Maladies des Yeux, published in 1873, refers to the affection. Mr. Oglesby, of Leeds, had a communication in the British Medical Journal for January, 1874, on a "Peculiar form of Nystagmus in Colliers." And in the

Lancet, for 1875, Dr. Charles Bell Taylor, of Nottingham, has an interesting paper, in which he details three cases out of

twelve, which had come under his care.

Various reasons have been assigned for the affection occurring in miners, but the two which seem to us to be the best, are these:—A miner, when working, lies on his side, looking up at his work, in a constrained position, in a comparatively dark chamber, and Dr. Bell Taylor considers that the overstrain produced in the muscles, in aiding the eye to accommodate itself to the small amount of light in the pits, causes the spasm, and he looks upon this affection as of the nature of chorea, and analogous to writer's cramp, or the spasm which sometimes occurs in the gastrocnemii of ballet dancers.

Other observers consider that when the miner is lying on his side, the oblique and recti muscles are called into requisition, in order to bring the eyes into a proper axis, and this continued strain gradually results in fatigue and spasm of the muscles. With this latter opinion we are inclined to agree. When miners, instead of lying on their side, have to stand at their work, looking continuously upwards, the superior recti muscles are affected, and the eyes are kept jerking upwards whenever the patient looks up; when he looks down the

movement ceases.

The disease, as a rule, occurs independently of other ocular defects, and is most generally seen in adults; those affected complain that objects continually keep moving, if they wish to look steadily at them. In some cases the objects at a distance move first, but gradually near ones are observed to tremble. In the cases detailed by various writers, no symptoms indicating that any other organs were diseased have been mentioned, except in the one mentioned by Dr. Byrom Bramwell, of Newcastle, in which palpitation and profuse sweating existed along with the nystagmus, but it still remains an undecided point as to how far the conditions were related. Various methods of treatment have been used. Mr. Gillot divided the affected muscles with perfect success in two cases, and the patients were able to return to their original employment. Dr. Schroeter recommends nux vomica, in small doses, on account of his view that the affection is produced by an injury to the nervous system, by the deleterious gas disengaged in coal pits. Mr. Snell, of Sheffield, and Dr. Taylor advise discontinuance of work in the pits, and in the greater proportion of their cases a cure followed; and in the case before us very decided improvement has followed since the patient has ceased working.

THE CAUSATION OF INSANITY.

BY DR. WILLIAM MACFARLANE, Assistant Physician, Merryflatts Asylum.

(Abstract of a Paper read before the Glusgow Southern Medical Society, on 14th November, 1878.)

The ordinary method of making up statistics of the causes of insanity is unsatisfactory; as, although in many cases there are several causes, we are generally compelled, for classifying purposes, to take only one—namely, the most important—as the cause of insanity. To remedy this source of confusion and fallacy, as well as to obtain more general accuracy, Dr. Major, in Vol. iii of the Psychological Journal, proposes a new and more accurate method. He takes all the chief causes, whether one, two, or more, and in placing them in a tabular form adds them together, like to like, irrespective of the number of cases under consideration; and, instead of saying that any one cause produced insanity in so many cases, says, that it contributed to the production of so many cases. For example, suppose that

In A. B. the causes were heredity, grief, and alcoholism.

" B. C. " " alcoholism and over-lactation.

" C. D. " " heredity and climacteric period.

These causes he would tabulate as follows:-

						Cases.
Heredity, contr	ibuted	l to the	production	on of		2
Alcoholism,	27	2 2	27			2
Grief,	22	2.7	9.7			1
Over-lactation,	27	,,	27			1
Climacteric peri	iod,	7.7	,,			1

Adopting this method, I made a careful investigation into the causes of insanity, in the first place, of 100 patients consecutively admitted into the asylum, nearly all of them being cases where the disease was acute, or not of long duration, and found that—

									Males.	Females.	Total.	Percentage Value of Causes.
Heredity,	_	_	contr	ibuted	to	the pr	roductio	n of	12	21	33	21.5
Alcoholism,	-	-	-	-	-	,,	**	_	23	12	35	22.8
Epilepsy,	-	-	-	~	-	22	27		7	2	9	5.8
Self-abuse, an	d oth	er se	xual	excess	es,	**	,,		11	6	17	11.1
Puerperal stat	e,	-	-	~	-	.,	22			6	6	3.9
Lactation,	-	-	-	-	-	21	**			4	4	2.6
Climacteric pe	eriod,	-	-	-	-	22	**			4	4	2.6
Old age, -	-	•	-	-	-	٠,	* 9		2	2	4	2.6
Privation and				-	-	22	2.5		7	2	9	5.8
Ill health from	n dise	ease (of liv	er, lur	ıgs,	etc.,	**		-6	5	11	7.1
Syphilis, -	-	-	-	-	-	22	* 5	,	1	1	2	1.3
Religion, -	-	-	-	-	-	**	2.5	,	2	3	5	3.5
Disappointme		-	-	-	~	* 9	,,			4	4	2.6
Business anxi	eties,	-	-	-	-	,,	**	,	1		1	.6
Grief, -	-	-	-	-	~	7.9	2:	,	1	4	5	3.5
Domestic unh	appir	iess,	-	-	-	22	*:	,	3	1	4	2.6

In the second place, taking 100 chronic cases, where the disease had existed for periods of from two to twenty years, I found that—

							Males.	Females.	Total,	Percentage Value of Causes.
Heredity, -	_	contri	buted	to th	e prod	uction of	16	18	34	22.7
Alcoholism, -	-	-	-	-	- 9	49	16	7	23	15.4
Epilepsy, -	-	-	~	-		29	.5	6	11	7.3
Self-abuse, and oth	er s	exual e	excess	es,	- 4	22	16	11	27	18.1
Puerperal state,	-	-	-	-		* 7		4	4	2.6
Climacteric period,	-	-	-	-		,,		7	7	4.6
Old age,	-	-	-	-	22	29	1	1	2	1.3
Sunstroke, -	-	-	-	-	. 4	2*	4		4	2.6
Religion, -	-	-	-	-	27	22	6	6	12	8
Disappointment,	-	-	-	-	22	20		1	1	.6
Jealousy, -		_	-	-	2.2	**	2	2	4	2.6
Grief,	-	un.	-	-	44		3	10	13	8.7
Domestic unhappin	iess,	-	-		**	4.9	2	5	7	4.6

On comparing these two tables it will be noticed that, in the first, intemperance occurs more frequently than in the second, while heredity, sexual excesses, epilepsy, and moral causes, less

frequently. This indicates that the insanity which results from intemperance is of a more curable nature than the

insanity which arises from these other causes.

Hereditary tendency to insanity is of all predisposing causes the most powerful and the most common. The amount of insanity due to this cause has been variously estimated at from 10 to 90 per cent. Esquirol traced it in 337 out of 1,375 lunatics; that is, in about 24 per cent. Holst is said to have traced it in 323 out of 467, or in 69 per cent. So much want of agreement between the computations of statisticians at least illustrates the difficulty of arriving at accurate data. People may be ignorant of the history of their ancestors, or, as often happens, anxious to conceal that there is insanity in the family. Again, the discrepancies may be due to statisticians themselves; some looking for insanity alone, others taking into account chorea, paralysis, and other diseases which may transmit a tendency that will become insanity in the offspring. In the making up of the tables given above, such disorders have not been taken into account, because of the difficulty of obtaining complete information regarding them.

Hereditary tendency being merely a predisposing influence, we generally find one or more exciting causes playing a part along with it. Taking the 67 cases alluded to, in which heredity took part in the production, its combination with

exciting causes was as follows:-

						Cases.
Heredit	y with	alcoholism,				10
2.5	,,	alcoholism and lactation,				2
,,	,,	epilepsy,				4
,,	,,	epilepsy and self-abuse,				2
,,	,,	self-abuse or sexual excesse				6
,,	27	self-abuse and religion,				2
٠,	,,	privation,				3
٠,	,,	bodily disease,		•		3
11	2.2	moral causes,				9
, ,	22	unascertained exciting cau		٠	•	24
,,	2.2	lactation or puerperal state	,			2

It is commonly said, that mothers are more liable to transmit insanity to daughters, and fathers to sons, than mothers to sons, or fathers to daughters. In trying to test the truth of this statement, I found that in 62 cases where heredity was an ascertained cause, 38 per cent of males had insane fathers, and only 15 per cent insane mothers; while 16 per cent of females had insane fathers, and 25 per cent insane mothers; clearly bearing out the statement alluded to.

Under unfavourable circumstances, tendency to insanity, especially if in both parents, is apt to become intensified in the offspring; while, through favourable circumstances and its subjects marrying with the sound, it becomes less potent. Another mode by which nature limits the transmission of insanity is by the descent of its subjects to idiocy, sterility, and extinction.

Intemperance, or the excessive use of alcoholic liquors, is, of all the exciting causes, the one which, in this country at least, is the most prolific source of insanity. It is extremely difficult to estimate correctly the direct and indirect effects of alcoholism. It affects not only the individual but also the offspring; moreover, the misery, privation, and crime to which it gives rise are no doubt widespread causes of insanity. The Earl of Shaftesbury, in giving evidence before a select committee of the House of Commons stated that, in his opinion, intemperance was the cause, directly or indirectly, of two-thirds of the insanity that occurs in this country.

Of the 200 lunatics embraced in the preceding tables, 58 were addicted to intemperate habits. In 21 instances intemperance was the only ascertained cause. In the remaining cases, although there existed one or more causes besides, it may safely be assumed that it was a cause, not always primarily, but sometimes at first symptomatic of disease, and secondarily a cause hastening the already commenced destruction of the mind. In 12 cases alcoholism was combined with hereditary tendency, in 7 with sexual excesses, in 4 with epilepsy, and less frequently with other causes.

The craving for alcohol may be transmitted from parent to offspring, or it may be slowly acquired or developed through

the force of bad example, habit, or educational vices.

The evil effects of alcohol on the nervous system become manifested in a variety of ways. Delirium tremens, mania, melancholia, imbecility, and general paralysis of the insane, are all forms of insanity which may be induced by intemperance.

The influence of intemperance on succeeding generations is hardly less striking and positive than on the present. Dr. Howe, of Boston, U. S., is said to have traced the cause of idiocy in 145 cases, out of a total of 300, to parental intemperance, but it is not commonly admitted in this country that alcoholism is such a great factor in the causation of idiocy, and at the Royal Albert Asylum only 16 out of 300 cases were ascribed to this cause. Although an idiot may have drunken parents it does not necessarily follow that parental intemperance

is the cause of the idiocy, there may be some other causative influence. For instance, in the case of M. T., the father was intemperate, but, also, both parents were syphilitic. There are, however, cases where the mental deterioration in the offspring can only be ascribed to parental intemperance. In one case the father is a confirmed drunkard. He has a family of two sons and one daughter, the first son is a depraved drunkard, and the second is an idiot of the lowest type. There is no trace of insanity in the family, and no other cause can be ascertained. In another case both father and mother are intemperate. They have four sons and two daughters. One son is an idiot, a second is weak-minded, and a third intemperate.

According to Dr. Langdon Downe, children conceived while the parents are intoxicated are likely to exhibit a remarkable phase of disease—namely, arrestment of mental and physical growth, with a peculiar facial expression, they may live for a period of 5 to 20 years, and yet maintain a condition of permanent infancy. I have seen one child which had a resemblance to those described by Dr. Downe. It is, however, doubtful whether there was any connection between intoxication on the

part of the parents and the condition of the child.

It is said that hereditary transmission is more likely to take place through a drunken mother than a drunken father; and that epilepsy is the most common of all diseases produced through alcoholic heredity. Of 17 epileptics, whose family histories I specially investigated, 10 had intemperate parents; in one case both parents were intemperate; in one, the mother only; and in 8, the father only. Investigations into the subject of alcoholic heredity are beset with difficulties, and accurate statistics would be difficult to obtain; but there is no doubt that many persons suffering from mental and physical deterioration are the victims of the intemperance of their progenitors.

CURRENT TOPICS.

GLASGOW AND WEST OF SCOTLAND MEDICAL ASSOCIATION.

THE Annual General Meeting of the Association was held in the Faculty Hall, on 29th January, 1879, Dr. Russell, President, in the chair.

The minutes of last annual meeting, and of the special

meeting on 25th October, 1878, having been read and approved of, Dr. Joseph Coats read his Editorial report, which also was approved.

EDITOR'S REPORT.

"In presenting his first annual report to the Association, the Editor would, in the first place, refer to the fact that during the past year the Journal has been issued for the first time in the monthly form since it was taken up by the Association. The change from the quarterly to the monthly form was regarded by many as of doubtful expediency, but it is believed that the experience of the year justifies the decision come to. The supply of literary material has been ample, and the Journal has always been issued a few days before the beginning of the month on which it was due. It is true that the more frequent issue has caused a considerable addition to the expense, but this has been more than met by an addition to the number of subscribers, and an increase in the advertisements, as shown in the Treasurer's Statement.

"It is in the knowledge of all, that towards the end of 1878 it was agreed to make a further change in the Journal, and this year it appears in a much enlarged form. The members have received the January number, and copies of the February number have already been delivered to some. Each of these contains 88 pages, which is an increase of 40 pages, and 8 more than was originally contemplated. It is probable that some of the future numbers will contain 80 and some 88 pages. Coincidently with the enlargement a change was made in the printer. The Association had hitherto employed Messrs. Dunn & Wright, and on the whole the work has been fairly well done. In view of the enlargement, estimates were received from other printers, as well as from Messrs. Dunn & Wright, and it was decided, after consideration, that Mr. Macdougall should print the Journal for 1879. It may be said that the chief consideration which determined this was the much lower charge which Mr. Macdougall offered to make for reprints. It has always been considered a matter of importance that authors of original articles should obtain reprints of their articles at a low figure, and we have made an arrangement with the printer by which the price charged is, we believe, as low as it can well be.

"It will be right to say something as to the prospects of the Journal during the present year, 1879. The Editor does not anticipate any difficulty in obtaining material to fill its pages in the enlarged form. The list of intending contributors of No. 3. Vol. XI.

original articles published in the January number is an indication that in this department there will be a good supply of useful papers. The Editor has, with the consent of the General Business Committee, asked Dr. Napier, of Crosshill, to undertake the duties of sub-editor, taking as his special department the obtaining of abstracts of interesting and useful papers in other journals. It is believed that Dr. Napier is peculiarly qualified for this kind of work, and this department is likely

to form a prominent feature in the Journal.

"It was also thought advisable to have a department in which brief records of current cases might be given. The Editor has been fortunate enough to obtain the assistance of two gentlemen who look after the collection of cases from the two infirmaries of the city. Dr. J. W. Anderson performs this duty in the Royal Infirmary, and Dr. W. G. Dun in the Western. It is believed that these records will prove interesting to a large body of the subscribers. There is no doubt that the surgeons and physicians of the hospitals are becoming more and more alive to the importance of giving every facility for the carrying out of this kind of work, and it may be added that the Editor has met, at their hands, with the most ready acquiescence in the arrangements he proposed in relation to this department. It is to be desiderated that the records should not be confined to these hospitals, and the Editor is putting himself in communication with the medical superintendents of asylums and hospitals in Glasgow and neighbourhood, with a view to obtaining cases from them. It is also desirable that members of the Association would send brief notes of cases in Private Practice, and it will be observed that the department has been designated "Reports of Hospital and Private Practice" directly with this view.

"It will be deemed of importance that something should be known as to the financial prospects of the Journal. Without going into detail, which can hardly be done in a general report like this, it may be said that, with a membership of about 300, and with a certain number of sales of copies to booksellers, &c., it is calculated that, from these sources alone, the Journal is likely to pay its way. There remain the advertisements, which may be regarded as a kind of surplus fund, which will be used to defray any extra charges, such as cost of illustrations, &c. A considerable number of advertisements have already been secured by contract for the whole year, or considerable portions of it, so that these statements can be made with some confidence."

Dr. Russell moved a vote of thanks to the Editor, which was

carried unanimously.

Dr. John Wilson, Treasurer, then read the state of Charge and Discharge for 1878, which had been verified by Drs. R. Scott Orr and Alexander Robertson. The balance at the end of the year was £97, 9s. 8 d. He also read the following notes regarding the funds: "The total income for the year 1878 was £232; the total expenditure £224, leaving a surplus of £8, apart from the reserve of £89 from the former year. All obligations for 1878 have been discharged. The receipts for advertisements (£38) are large in comparison with £17 of the former year; and about £34 are still expected to come in for the advertisements of the past year. About £17 worth of subscriptions are yet due by country members and others. Only 16 subscribers withdrew their names at the beginning of this year, while there has been a steady increase in the number of new subscribers. The receipts for 1879 already amount to £27, which, under deduction of £6 of expenditure, leaves £21 to be added to the £97 (the 1878 balance), making the whole cash in hand at this date £113, 13s. 81d., to be handed over to my successor in the office of Treasurer—an office which I have had the honour to hold for the last five years, and now desire to resign. On the whole, the prospects of the Journal seem to be hopeful in their financial aspect, and in every way; and the Editor is receiving congratulations on its success from many correspondents."

Dr. Russell then moved a vote of thanks to Dr. Wilson for his report, and for services rendered as Treasurer during the last five years. This was passed unanimously by the meeting. The Secretary, Dr. William Macewen, having intimated his desire to be relieved of the office, a vote of thanks was, on the motion of the President, accorded to him. The

following Office-bearers for 1879 were then elected:—

President-Dr. J. B. Russell.

Vice-Presidents-Dr. ALEX. ROBERTSON AND DR. PATTERSON.

Editor-Dr. Joseph Coats.

Treasurer—Dr. Hugh Thomson.

Secretary-Dr. ALEX. NAPIER.

General Business Committee.

The Office-bearers ex-officio.

Dr. A. Wallace.

Dr. Scott Orr. Dr. M'Vail.

DR. M'LAREN.

DR. EBEN. DUNCAN.

Dr. G. H. B. MACLEOD.

Dr. John Wilson.

DR. H. E. CLARK.

The meeting terminated by a vote of thanks to the President.

REVIEWS.

Dispauperization: a Popular Treatise on Poor Law Erils and their Remedies. By J. R. PRETYMAN, M.A. Second Edition. Longmans, Green & Co., London, 1878.

This is an earnest and interesting book, although the views it advocates are extreme and one sided. It deals with the history and defects of English poor law administration, and the reader should have beside him, for comparison and contrast, the able treatise of "Scotus" on the Poor Laws of Scotland. The two writers show strikingly how earnest and thoughtful men may reach very opposite conclusions. Scotus deems poor law relief wise and necessary; our author deems it an unmitigated evil, and desires nothing so much as its abolition.

The volume commences with a brief history of poor laws. The evils they produced in the earlier part of this century are forcibly pointed out, as well as their modification and amendment in consequence of the report of the Poor Law Enquiry

Commission, published in 1834.

Distinguishing the hand-working and head-working classes, the author then discusses the material mischief to the former, produced by the poor laws. The first and great evil they produce is reckless improvidence. The majority spend each week's wage as it comes, without care or thought for the future. Secure of relief, and presuming, with all confidence, on the "veritable magna charta of improvidence," the poor law, they say, "Let us eat and drink, for to-morrow we—can go to the Parish." How far is this true? Do the spendthrift and the drunkard cherish the prospect of the poorhouse amid their dissipation, and is their reckless folly really based on shrewd calculation and forethought?

That the poor law discourages thrift seems a much truer accusation. When its aid is invoked it makes no discrimination between the provident and the thriftless applicant, the former finding, to his bitter mortification, that the savings of years, the fruit of sobriety and industry, are at once claimed by the parish when he seeks its help, leaving his family in no better position than that of the spendthrift, and securing for himself nothing better than the provision made equally for the idler and the drunkard. This impeachment is too true, and is assuredly one of the greatest defects in poor law administration. Another phase of this discouragement to thrift is often seen, if a member of a hand-worker's household

becomes insane, when the parish demands repayment of an undue proportion of its outlay. A home that was far above pauperism becomes utterly impoverished, all the savings are swallowed up, an embargo is laid on the weekly earnings, and the household reduced to such poverty that any further calamity throws the whole family on the parish. Their former thrift is thus valueless to them, and the obvious lesson is that it was not worth while to save.

The tendency of poor relief to lower wages is also justly urged, but this is true more in England than in Scotland, where the able bodied poor have no legal claim to relief. Of course the law-assisted labourer can live on less, and the heavily taxed employer is able to pay less. In some agricultural districts the rates have even been used to keep down wages, the farmers preferring to have high rates, which all sections of the community helped to pay, and to employ deteriorated and dependent labourers.

It is a material injury to all the non-pauper class that the idle and improvident should be maintained by the provident and industrious, and entails a great and constant drain on the national purse, but the moral injury sustained by the recipients

of poor law relief is greater far.

The secure anticipation of such relief, come what may, has a most demoralising influence. It encourages reckless marriages and illegitimate unions; it makes wife desertion easy, and loosens the mutual obligation of parents and children to support each other; it favours idleness, intemperance, and improvidence; it prompts to fraud and imposture in order to obtain relief; it disturbs the relations between employer and employed; and it undermines all feeling of honest independence and manly self-reliance. The parish dole ceases to be a last resource, accepted with humiliation and sorrow; it comes to be regarded as a right, and a right which must by no means be allowed to lapse by reason of disuse.

This mood is quickly acquired, for self-dependence, once broken, is never perfectly restored. Each succeeding application for relief is made on slighter grounds and with less reluctance, until the aid is scarcely regarded as a favour at all, and is demanded as unhesitatingly as if it were a lawful debt.

This habitual pauperism, like habitual crime, is strongly hereditary, and many parishes can show successive generations of paupers—in families which had so long depended on public and private charity, that no means of earning a livelihood were thought of, and all idea of self-support seemed to have totally disappeared.

It is sad and wrong that the deserving poor, who are compelled by accident or misfortune to accept parish help, should be classed, even nominally, with pauper parasites like these, and we cannot wonder that nothing less than dire necessity will compel them to accept an association so degrading.

Condemning compulsory poor law relief, in every form, as a false and baneful benevolence, as less efficient and more indiscriminate (!) than private charity, the author goes on to discuss the gradual steps for the abolition of the poor laws, the remedial measures required, and the power of self-help and

voluntary benevolence to supply the place of legal aid.

The steps in abolition—and it should again be noted that the book deals especially with the English poor law—are, the annulment of all outdoor relief to able-bodied paupers, a far greater use of the offer of "the house," no outdoor relief to illegitimate children and their mothers, nor to deserted wives and their families, no heed to be given to the threat of self-starvation when the house is offered, better relieving officers and more of them, increased power to the guardians and

greater strictness in using it.

The judicious administration of outdoor relief is declared to be impossible, for exceptional cases soon become so numerous that the exception becomes the rule. The hardship of breaking up homes should not be listened to as a plea, for nine-tenths of the applicants for relief, when offered "the house" or nothing, prefer the latter, and manage to keep their homes and to support themselves by their own efforts and the help of friends. Outdoor relief of sick paupers should be confined to those whose removal to the house would be dangerous to themselves, or, by reason of the nature of their malady, injurious to others; this checks fraud and stimulates the charity of friends who would accept outdoor relief without shame, but shrink from the disgrace of having a relative in "the house."

Strikes, being a form of self-inflicted distress, should constitute no ground for relief; it is a law of nature that the consequences of each man's conduct must be borne by his

family as well as by himself.

These decided recommendations almost read as if the author held a brief for the ratepayers, and as if the object were not how best to help the poor, but how to help them as little as possible. For this end their wisdom is unquestionable, but it is equally certain that, if strictly carried out, they would entail extreme hardship and suffering.

The poor laws may be made a blessing or a curse according as they are wisely or loosely administered, and it is greatly to

be regretted that the delicate and difficult duty of administering them is so often avoided by the best citizens, and often sought by inferior men for the mere sake of a little brief

authority.

There is nothing specially new or striking in the remedial measures recommended. Advice has often been given about the increase of friendly societies, the wider use of savings banks, the purchase of government annuities by monthly payments, education to self-reliance instead of parish reliance, enforced maintenance of poor relations in the direct line, plots of ground for agricultural labourers, preservation of common rights, state aided emigration, improved education of the people, and industrial education of pauper children.

It is so pleasant and easy to proclaim remedies, so hopelessly

hard to procure their adoption!

Contrasting legal with private benevolence, the author, unhesitatingly, and under all circumstances, prefers the latter. He urges that in great emergencies, like the Lancashire cotton famine, legal aid fails, and must be supplemented by public subscription. He gives illustrations from other countries to show the efficiency of private charity, where no poor laws exist, and he has no misgivings as to its adequacy to meet and effectually relieve all the destitution of our own land. Knowing something of the squalor, want, and misery in our great cities, we have, as yet, no such confidence in private benevolence; but it may well discharge the task in "the good time coming," which is pictured at the close of the volume, when the rich shall fully realize their duty to their poorer brethren, and when, freed from the curse of poor laws, all the poor shall be frugal, sober, provident, and self-reliant.

We naturally expected in this book some discussion of pauperism from its medical side; for it is here, and especially as regards the occurrence of insanity, and of infectious disease among the poor, that official interference and aid seem quite indispensable. This aspect of the subject is, however, wholly

and conveniently ignored.

It is obvious that private benevolence would utterly fail to meet these cases, and that not only the individual but others also would be endangered by the attempt. On the other hand, we feel strongly that official aid given in such circumstances should not be held to pauperize the recipients, and, indeed, were it otherwise practicable, should not be rendered by the "parish" at all. Surely the time is coming when measures of public health will be taken out of the sphere of parochial influence, will be administered as part of a great system by government

officers, and will be paid for, save such purely local works as water supply or drainage, by imperial taxation. Surely a "President of the Board of Health" would represent a far more important interest than some of the officers now included among Her Majesty's ministers.

Notwithstanding this great omission, and the extreme views which are advocated in this volume, it is well worthy of thoughtful perusal by all who are interested in the difficult and important questions connected with the legal relief of the poor.

Die Hantkrankheiten für Aerste und Studirende. Dargestellt von Dr. Gustav Behrend, Pract. Arzt in Berlin. Braunschweig: Friederich Wreden, 1879.

The Diseases of the Skin, for Physicians and Students. Described by Dr. Gustav Behrend, Practitioner in Berlin,

1879. Pp. 569.

One of the principal features of the work now before us is the thoroughly systematic manner in which it is written. The author first separates his subject into two great divisions; the former of which is concerned with the skin in general, is introductory to the main portion of the book, and comprises a series of chapters on the anatomy of the skin, the physiology, elementary lesions (primary and secondary), the diagnosis, the etiology, the treatment, and classification. The second great division is devoted to the consideration of the special skin diseases.

Under the heading "Classification," Dr. Behrend gives a short review of the various modes of classifying that have been attempted; but he wisely refrains from adding one more to the list. He adheres to that of Hebra of Vienna. It is almost natural that he should do so; but we ourselves prefer the one adopted by Dr. Tilbury Fox, as being much more simple. His "elementary lesions" are, as usual, divided into primary and secondary; the primary comprising maculae (including alterations in pigmentation), papulae, tubercula, phymata, urticae (pomphi), vesiculæ, and bulke.

The secondary forms are pustule, excoriationes, ulcera cutanea, rhagades, squame, cruste. With this arrangement we do not quite agree. In the first place, though we are well aware that abnormalities in pigmentation are often of value in the diagnosis of skin diseases, yet they are not peculiar to cutaneous structures. We, therefore, consider that it would be better to discuss them apart from elementary changes. Again, though it has been usual to describe tubercles as

elementary lesions, the term, as applied to the skin, is of very uncertain signification, and does not admit of precise pathological definition. If the word is to be retained, we hardly think that it should take its place amongst such well defined designations as vesicles and wheals. Further, we do not see why Dr. Behrend should classify squame amongst the secondary

elementary lesions, and not amongst the primary.

We do not think it necessary to discuss, or even to contradict, Dr. Behrend's account of the diseases of which he treats; we simply content ourselves with this very general outline. We should, however, point out the thoroughly business-like manner in which the special affections are treated, each being carefully considered as to its history, etiology, diagnosis, prognosis, and treatment. The book contains 28 woodcuts, which, for delicacy of finish and clearness of outline, are everything that can be desired.

A Handbook of the Diagnosis of Skin Diseases. By ROBERT LIVEING, M.D. Pp. 266. London: Longmans, Green & Co., 1878.

To be able to present to the mind a clear and faithful picture of any disease, and especially of a skin disease, requires considerable descriptive power. Judging from the present little work, Dr. Liveing possesses this power in a high degree. His style is particularly clear, and he is not given to the wasting of words. The book is not a mere compilation, but contains really practical information. The author is thoroughly original, and does not hesitate to ventilate his own opinions, and even oppose them to those of the highest authorities. It may be of interest to note some of the special features in this little work.

The introductory chapter deals with the best method of observing diseases of the skin; and, at the very outset, the author objects to Hebra's method of founding a diagnosis on purely objective symptoms. In describing "elementary lesions," he points out that a definite meaning should be given to the terms in use. For example, inflamed papillae, and small projecting collections of sebaceous matter within the follicles are both equally called "papules"; and the word "squame" is applied to the scales of lepra, as well as to the peculiar crusts of ichthyosis. Some authors even classify psoriasis and ichthyosis together, under the head of scaly diseases. (This confusion has evidently arisen from Willan's method of classification, which is based entirely on the "elementary lesions.")

Again, papules may be simply a second stage in the inflamma-

tory process, as in eczema or varicella; or they may be the acme of the process, as in measles or lichen planus. Moreover, vesicles are not diagnostic of any one disease; for, though they are the rule in eczema, herpes, and pemphigus, they may also be met with in exceptional cases of measles and crythema. Three varieties of pustule may be recognized: (1.) The acne pustule; (2.) the catarrhal pustule; (3.) the pock or small-pox pustule. The first of these is not a pustule at all, but simply a "boil;" while the two latter may occur in syphilis, and may present umbilication and pitting.

Dr. Liveing rejects Willan's classification as bad, and adheres pretty closely to that of Tilbury Fox. He makes eight classes, the first treating of inflammation (with a sub-class for the exanthemata). Acne receives a place in this class, instead of in the skin-gland group. Pruritus is the only neurosis; and

tinea tonsurans the only tinea.

Variola is the first specific eruption described; and the differential diagnosis of variola from measles, scarlatina, acne, glanders, and syphilitic eruptions, is excellently discussed. Care is taken to point out that in varicella you may have umbilication and pitting. Erythema is subdivided into papulatum, nodosum. &c.; and he disagrees with Hebra in believing that the constitutional symptoms of crythema nodosum are not directly due to the skin inflammation. Dr. Liveing adopts the term "cheiro-pompholyx" of Mr. Hutchinson, in preference to Dr. T. Fox's "dysidrosis," which he regards simply as hyperidrosis and eczema.

Pityriasis rubra is held to be a form of eczema, and alopecia

areata as simply an atrophic affection.

Other peculiarities in Dr. Liveing's teaching might be cited,

but space will not permit.

The whole book is well got up. The differential diagnosis of several of the diseases is arranged in a handy tabular form; at the end of each chapter are useful references to plates; and Dr. Liveing has very wisely added illustrative cases of some of the rarer diseases. Of Rötheln he gives several interesting examples. The book finishes with a short chapter on feigned diseases of the skin, associated with hysteria.

In conclusion, we cannot help remarking that, although Dr. Liveing has already published Notes on the Treatment of Skin Diseases, we consider that the utility of the present work would have been increased by the addition of a short paragraph on the best mode of treating each disease. As it is, however, we shall be much surprised if it does not become one of the

most popular of handbooks on skin diseases.

Elements of Comparative Anatomy. By Carl Gegenbauer, Professor of Anatomy at Heidelberg. Translated by F. Jeffrey Bell, B.A. The Translation Revised and a Preface Written by E. Ray Lankester, M.A., F.R.S. London: Macmillan & Co. 1878.

It is a national misfortune that the ignorance of German is still so general as to make the appearance of a translation of a standard German text book matter of congratulation. But, as hitherto Gegenbauer's work has been sealed to the great majority of students, we owe, and would offer hearty thanks to Professor Ray Lankester and Dr. Jeffrey Bell for having "faithfully Englished" one of the best extant summaries of comparative anatomy. This work, and that of Huxley, are useful to two quite distinct classes of students. The medical student rarely seeks to obtain more than a sketchy notion of the general structure of the larger animal groups; and though he thereby loses much of the insight which comparative anatomy affords into the physiology of mammals, it must be remembered his time is much occupied; and as things go now, it is a comfort that he acquires even a slight knowledge of biological problems outside of his professional work. Indeed, the teacher is fortunate whose pupils, or at least some of them, buy Huxley in preference to Nicholson. But the students of science, the aspirants to a degree in science, are in a different position; it is to them we look for our future naturalists; it is among them, as men of high culture, that we hope to find the judicious speculation and acute criticism, by the combination of which biology may be advanced. For them, therefore, the comparative method adopted by Gegenbauer is the most important, and, if combined with practical work, the most instructive. Under each of the leading groups of animals the systems of organs—alimentary, integumentary, and so on—are discussed, so as to show the modifications, from the simplest to the most complex forms, and the student is enabled to strike a balance, so to speak, between the different systems, and to learn the inequality of development of, say the alimentary as compared with the nervous system.

Though Gegenbauer is not one of the most advanced school, though he belongs to the class of anatomists who like to keep secure hold of facts while indulging in speculation as to their meaning, he has gone a good way towards adopting certain extreme views which may be right, but of which the evidence is not quite satisfactory. As a working hypothesis, the gastreea theory may be an interesting one, but we cannot recognize

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Gegenbauer's statements regarding it as satisfactory in themselves, far less as proving the usefulness of the hypothesis. As the result of division of the egg cell, we have a two-layered vesicle, the inner layer being the primitive alimentary portion. But these two layers may be formed either by the ingrowth of cells from the outer layer (or epiblast), or "the process of division is represented as taking place differently, so that it is impossible to make out whether there is any phenomenon common to all cases, and, if so, how far it is common." The author, therefore, rightly declines (p. 34) "to make any generalization about it." But in the next page the following passage occurs—"A gastrea form resembling the gastrula has been regarded as the primitive ancestral form of all animals. This gastrea theory is based—First, on the existence of independent animal forms which resemble the gastrea; secondly, on the fact that the embryonic body, which commences with a gastrula, does not, in the lower divisions, rise very much above it; so that, even apparently, considerable complication of the organism can be traced back to the existence of these two layers of the body; thirdly, the presence of these two layers of cells forming the ectoderm and endoderm as a general, constant, and therefore regular phenomenon, even in the higher divisions of the animal kingdom, as well as their constant relations to the same functions, is a fact of the greatest importance for the hypothesis in question; indeed, the occurrence of these layers, as the so-called germinal layers which make up the embryonic body, cannot be rightly understood without reference to a hypothetical gastraea form. This hypothesis may therefore be regarded as justified." Thus, in two pages a philosophic anatomist declines to generalize where there is no proof of a common basis of facts, and then rushes into the accumulation of hypothesis on hypothesis to explain the homology of structures which are not homologous. For, as Gegenbauer puts it (p. 34), the second layer of the embryo may arise, not by ingrowth, or rather invagination, but by development of a second layer of cells concentric to the first or outer. Now, if the latter process occurs, the central cavity bounded by the inner layer of cells is equivalent to the segmentation cavity, or that resulting in the centre of the egg from successive divisions. But if the former or invagination process takes place, the cavity bounded by the inner layer is not the segmentation cavity, for that has been reduced to nothing by the ingrowth of the ectodermal cells. The two cavities are not in these two cases homologous. When, therefore, in the passage above quoted, Gegenbauer speaks of these two layers as "having a

constant relation to the same functions," he must, when this is collated with the text on page 34, be admitted to have, per incurium, confused analogy and homology. But when he further considers that the evidence contained in the passage cited "justifies" the hypothesis of a gastræa, he only piles one assumption on the top of another; or, to avoid the possibility of speaking too strongly, he adopts certain ways of putting the facts as if they implied the existence of different laws from those involved in another method of stating the case. We have abstained from discussing the general question of the gastræa hypothesis, content to show that in the hands of so able an expositor as Gegenbauer it is not capable of such definition as shall give a coherent theory of the digestive cavity

throughout the animal series.

In describing the Insecta, the reference to the "fat body" is too brief, nor does it include all that is known or may be inferred regarding its duties. No view of its existence is advanced which puts out of court the notion that it represents the unused yelk remains—that it is a mass of nutritive yelk, which degenerates still further when the closure of the enteron excludes it from the intestine. From this mass the parthenogenetic larvæ of cecidomyia and the "imaginal discs" of corethra arise; and when Leuckart says that the cecidomyia larvæ arise from pseudova which have not been included in the ordinary form of ovary, he simply, to our thinking, takes the first stage in the conversion of the fatty body into a germ, omitting to take note of what preceded that first stage. importance of the question lies in this that, first, we have, in the view suggested, a coherent account of the origin of the ovaries complete and incomplete, of the male organs, and of the viviparously produced broods of plant lice, and of cecido-Next that, after all, Owen erred only in his way of putting it, when he ascribed the multitudinous broods of the plant lice to the infinitely divided influence of a single male; for each successive brood carries onwards a portion of blastema, or of a mass derived from the original blastema, which resulted from the interposition of a male. Lastly, we get some insight into the mode of transmission of characters by the female side.

It is open to a zoologist to adopt any classification which he thinks right, and he will be judged by the evidence which he sets forth as appearing to him satisfactory, in favour of his views. But as Professor Ray Lankester understands Gegenbauer's book as a text book for students, we may fairly ask if it is right to set forth as undisputed conquests of observation and reasoning

certain conclusions which are still, to put it mildly, open to discussion. Gegenbauer assumes it as not needing argument that the Brachiopoda should be put into a group by themselves, and he speaks in similar terms of the Tunicata, which we may be thankful he has not called Vertebrates. When we turn to these groups we find certain summary statements which convey to the student no idea of the difficulties, or of the importance of the problems underlying this question of classification. And the omission is the more startling that the Polyzoa are, without comment, retained among the Worms. Now, if Gegenbauer had put the Vertebrates among the Molluscs, we should have said no word of censure provided that arguments had been set forth in favour of the view, for the arguments of a master in support even of an improbable hypothesis are an education. But not merely do we find no arguments, we find contradictory statements: thus, p. 388, it is said, "In the position of the most important organs and their primitive relations, we find [in the Tunicates] the most obvious indications of vertebrate affinity. Thus we find the enteron with its foremost division adapted to the functions of a respiratory organ." But on page 398 we find, "The peculiarity of the Tunicate phylum consists in the elaboration of the anterior portion of the gut into a respiratory organ, similar to that which we found among the Worms in the enteropneusti." The old grouping, whereby the Polyzoa, Brachiopoda, Tunicata, formed an assemblage of Molluscoida, was after all a safer one, since their association under a common heading, their neutrality amidst conflicting claims, was a more defensible position than a partition against which as many arguments may be advanced as are adduced in its favour. Nay, even the position of the tail among the Tunicates has not been discussed with sufficient precision. has not been shown that the tail is developed from the neural surface, for "aboral surface" does not imply that; the lateral position of the nervous strand to the caudal (vertebrate?) axis is not explained; in short, the fascinating network of difficulties has been cut through without an attempt to unravel it for the benefit of students. Professor Ray Lankester bespeaks tolerance for some of Gegenbauer's positions. He says, in effect, do not be hard on our author, even if he does set forth a view of the cuttle-fish arms which Mr. Huxley has not adopted; he has been led by Jhering, whose dogmatism Mr. Huxley resents. Professor Ray Lankester might have spent a word of apology for the dismemberment without evidence of groups where colligation is suggested by comparative anatomy, which is the aim of the book, but is not unsupported by comparative

embryology, which is not the aim of the book. In the preface, p. xv, Professor Ray Lankester says, "A classification is the condensed expression of an author's views, as the epitome of his teaching, facilitating the recollection and the comparison of conflicting solutions of the vast series of unsolved problems of morphology." But we don't want an author to epitomize his conclusions for the benefit of students; let him give his comparison of facts, and show how he arrives at his conclusions. And if a classification, based on pedigree, "varies from year to year with the increase of our knowledge," it is unfair to the young zoologist to feed him on what such variations prove to be most unsatisfactory diet.

We wish to point out that while Gegenbauer still, in the main, preserves a judicial attitude, he has in too many instances yielded to the vehemence of his former associates and accepted their hypotheses, converted by lapse of time into dogmata, as if they represented the clear gains of science. But when all this is spoken, we still return to our first statement, that this book is a valuable addition to our students' manuals, and one which we hope to see largely used in our zoological and physi-

ological laboratories.

The translation is on the whole good; certain stiffnesses here and there are pardonable, since they guard against misinterpretation. But why say an organ "functions"? An Americanism of this sort is uncalled for on the part of English "scientists," to use an equally abominable term. Some other novelties as "veinous," we noted, and slips in the letterpress of some of the engravings. These will doubtless receive correction in future editions. Perhaps it would be well for Professor Ray Lankester to say, speaking of Mr. Huxley's views as to the relations of the otic bones to the mandibular and hyoid arches, not that further investigations led him to a modification of his views, but that Peters' criticism induced him to reconsider the matter. The correction would do justice to Peters without harming Huxley.

REPORTS OF HOSPITAL AND PRIVATE PRACTICE.

GLASGOW ROYAL INFIRMARY.

UNDER THE SUPERVISION OF DR. J. WALLACE ANDERSON.

FROM DR. MACEWEN'S WARDS.

PARAFFIN JACKET IN DISEASE OF SPINE-ANTISEPTIC OSTE-OTOMY—PARAFFIN SPLINTS IN COMPOUND FRACTURE OF LEG.— Dr. Macewen continues to devote special attention to orthopædic surgery, and has at present in his wards some interesting cases of spinal deformity under treatment after Sayre's method, and several examples of genu valgum, &c., which have been operated on lately. A case of posterior angular curvature of spine in upper lumbar region was put up in a paraffin jacket on Savre's principle, and it may be worth while describing the manner in which we saw it done. The patient was a rather strumous looking girl, about 13 years of age, in whom the deformity had existed for a year or two, and was now causing feebleness and numbness in the lower limbs, especially the left. She was stripped to the waist, and over her petticoat a large piece of mackintosh was placed, which reached to her feet. The floor under Sayre's tripod was similarly protected; the head and shoulder straps were then fixed to the patient in the usual way. Meanwhile, Dr. Macewen had prepared the paraffin jacket in the following manner:-

A layer of cotton wool—the whole thickness of the ordinary one pound packet-was taken and fitted to the trunk so as to envelop it completely, reaching from the waist to the shoulders. Two pieces of thin strips of Gooch's splint, into each of which three wire hooks had been fixed, were then inserted into the cotton about three inches from each lateral border, and the wire hooks passed through to the outer surface of the cotton. This is to admit of the jacket being laced on afterwards. whole apparatus was then put into a can of liquid paraffin (made and kept so by being placed in another vessel of boiling water) and when completely saturated was laid on a table covered with mackintosh, and the superabundant paraffin gently expressed. The patient was then gradually raised till only her toes touched the ground, and the paraffin splint or jacket applied and fixed on by gauze bandages. This being done, she was laid on a mattress protected by mackintosh, and cold water poured over

the jacket to hasten its cooling, the sides of the waterproof being raised so as to form a kind of bath as the water accumulated. This is not absolutely necessary, but it reduces the process of cooling from perhaps half-an-hour to a few minutes. The jacket being now perfectly hard and unyielding, was cut down one side and then laced on, the tape being carried round the hooks above referred to. It can thus be removed at night, or for daily ablution. Elastic bands may be used in place of an ordinary lace to give greater freedom in respiration.

All the cases operated on for deformity of the lower limbs were put up antiseptically in half box-splints, each, however, having the outer border carried almost up to the axilla, very much like a Dessault's long splint. To this the limb is bandaged so as best to counteract the particular deformity. We saw six such cases, and in none was the original dressing touched, it being judged that everything was right on account of there being "freedom from pain, a normal rectal temperature, and no discharge appearing on the dressing." They were all typical examples of Dr. Macewen's practice, as described in his paper on Antiseptic Osteotomy. (Lancet, Dec. 28,

1878.)

The use and advantage of the paraffin splint were seen in one or two cases of compound fracture of the leg. In one where the opening was on the upper surface, the limb lay on the lower segment of a paraffin splint, which fitted it accurately, and which was placed on a Salter's sling. This gave a firm and comfortable support to the leg without padding of any kind, so that when it was thought advisable to clean the lower surface of the leg a stream of carbolic water (1-40) was simply run into the splint and allowed to escape by one or two perforations in its lower border. These latter, of course, as well as the fracture itself, were treated antiseptically, to prevent the approach of any adventurous germ even by such a circuitous route. In another fracture of the leg a piece had been cut out of the paraffin splint opposite the wound, by means of which any movement of the limb was obviated during the dressing. The wound was washed out with carbolic water (1-40), a piece of soft gutta-percha tubing used as a syphon being employed in place of the ordinary syringe. As in the previous case, the inner surface of the splint was washed out with the same solution, the water escaping by perforations in its lower The wound was then dressed with a small piece of antiseptic gauze, the lid of paraffin splint put on over it, and the whole leg covered, over the splint, with antiseptic gauze, so as to protect the perforations referred to, just as in the former

case. The antiseptic spray, of course, was used during the whole dressing.

FROM DR. MORTON'S WARD'S.

COLOTOMY IN THE FAR WEST.—On the 14th January last, a patient presented himself at the Royal Infirmary, having been recommended to Dr. Morton's care by Dr. Peter Manson, Virginia City, Nevada, and gave the following history:-He is about 50 years of age, and in August last was troubled with pain in the bowels, followed by obstruction and much abdominal swelling, for which, on 2nd September following, Dr. Manson performed an operation on his left side. On examination, a well formed patent artificial anus was found in the left lumbar region, and digital exploration of the rectum revealed the existence of malignant disease, doubtless the cause of the obstruction, to relieve which the operation had been performed. Some enlargement and induration of the liver were also made out. The patient having reported himself, left the same morning, and the above is the very short account he gave of himself at the time. Dr. Manson, who some years ago was a Visitor at the Royal Infirmary, seems to have been successful in accomplishing for his patient all that it was in the power of a surgeon to do, and merits our sincere congratulations.

From Dr. Cameron's Wards.

case of dislocation of hip on os publs.—An instance of this rare accident was admitted on 4th January last, in a boy 11 years old, who could give no more distinct account of the occurrence than that he fell off a merry-go-round. The head of the bone was distinctly visible above Poupart's ligament, while the trochanter was conspicuous by its absence. The limb was abducted, and the knee slightly flexed. There was an inch of shortening. Dr. Cameron effected reduction under chloroform, by lifting the head of the bone as well as possible off the os publs, firmly flexing the thigh on abdomen, and rotating the limb inwards.

FRACTURE OF LOWER JAW.—J. R., act. 10, was admitted on 4th January with a fracture of the lower jaw, which could not be maintained in position. This difficulty was got over by a plan now much practised—viz., by drilling each fragment and tying them together by a stout wire. The drill used was a carpenter's common bradawl, the best of all bone drills.

Reported by Mr. HERBERT, House Surgeon.

HÆMORRHAGE FROM VARICOSE ULCER.—John C., aged 48, was brought into Dr. Cameron's wards on the 8th January, 1879, by two policemen, who had found him lying in St. Enoch Square unconscious, with a pool of blood on the pavement round his left leg, the stocking and boot of which were saturated and filled with blood. Before admission, the patient had recovered consciousness, and told us that he had had for years a sore leg. On stripping the leg, and removing clots, a large callous ulcer was found over the lower and front parts of the shin. The leg and thigh were affected by severe and extensive varix. He was put to bed and no more blood was lost, nor was it possible to identify the exact spot in the ulcer from which the bleeding had occurred. He was faint and blanched, and continues to the present time very anamic. Dr. Cameron made this case the subject of a clinical lecture to his class, in the course of which the following explanations were given in reference to the hæmorrhage:—While it was a very common circumstance to have alarming bleeding from a wound or an ulceration into an artery, the case was quite different with a vein. Here the hamorrhage was much less and tended to cease spontaneously. But hemorrhage from a varicose vein of the leg, opened into by an ulcer, was apt, like that from an artery, to be profuse, rapid and continuous, so long, at all events, as the patient was in the upright posture. He had, he said, once seen an immediately fatal result from this accident. The explanation of the difference between the two cases was to be sought for in the altered condition of the veins in varix, which were much distended and thickened, conditions leading to complete incompetency of their valves. These no longer perform their proper function, that of supporting the column of blood, and thereby aiding its return from the foot to the heart, in opposition to the force of gravity. Now, when such a patient as the present one is walking along the streets, the enormous distension of the veins of his leg and thigh is at its fullest, and if an opening be made into one of them in the lower part of the leg, of a sudden, it will be readily understood that the whole column of blood, from the leg almost to the heart (since the iliac veins and vena cava are naturally destitute of valves, and those of the leg and thigh are as good as if they had none), may rapidly be poured out in a regurgitant stream. In fact, it is from the upper end of the venous wound that the bleeding occurs, and not from the lower, as would be the case with a healthy vein, free from unnatural

distension, and, therefore, with perfectly competent valves. In the present instance (and fortunately it is so in most instances) the patient became faint, and fell before a fatal loss of blood had occurred; and this compulsory assuming of the horizontal position at once staunched all further hæmorrhage.

FROM DR. DUNLOP'S WARDS. Reported by Mr. THORNLEY, Dresser.

ILIO-LUMBAR ABSCESS ALMOST COMPLETELY FILLING UP PELVIC CAVITY—PRESSURE ON NECK OF BLADDER—RETENTION OF URINE. -G. M. was admitted to ward 15, on 21st November last. He stated that, after exposure to cold about eight months ago, he was seized with a violent pain in his right loin, which continued more or less for about eight days. He was prevented working by the pain, which seemed to him to be deep in his bowels. He was under medical treatment; and, as the pain subsided, there appeared a swelling in his belly, which has gradually increased ever since. He had been confined to bed for several weeks, and recently he has had great difficulty in voiding urine. On admission, patient has all the appearance of having suffered, and of having been ill fed; he is poor and emaciated, and still complains of great pain. There is no evidence of disease of the lumbar vertebra. The right half of the pelvis is occupied by a large fluctuating swelling, which is seen to bulge at Poupart's ligament below, and to extend deeply down into the pelvis. On turning the patient on his left side, there is felt between the right tuber ischium and the anus a swelling which is deep, however; but on pressing the swelling above there is a sense of fluctuation below. Immediately over the crest of the right ilium there is also a swelling containing fluid which has a distinct connection with the main swelling in the pelvis. This large abscess was kept under daily observation for a short time, when it was considered that there was a likelihood that it would point, not in the groin, but near the crest of the ilium. It did so, and on the 30th, under the spray, it was freely opened there; about 30 ounces of feetid, greenish pus escaping. After the complete emptying of the abscess it was found that the swelling near the anus had disappeared, and that there was no difficulty in voiding urine. There was no further necessity, therefore, for the occasional use of the catheter. In addition to opening the abscess under the spray, a large drainage tube, about 6 inches long, was passed into the cavity of the abscess. From the direction which the tube took, and from its length, it was evident that the cavity of the

abscess had reached deeply into the pelvis, and would probably have presented in due time near the anus. For the first few days the abscess was carefully dressed daily under the spray, and its cavity washed with 1-40 watery solution. By keeping the patient well on his side, and somewhat on his face, every facility was given for effective drainage being carried on. By and bye the discharge diminished, and the dressings were only changed once in a few days. On the 6th January, 1879, he was dismissed, greatly improved in health, and with all trace of the abscess, except the external scar, entirely removed. It was remarked of his case that it showed the interesting results that are often obtained by spray dressings. A large abscess of several months' duration, which had by its pressure upon the bladder and rectum greatly inconvenienced the patient, already much reduced, was quite cured, and the patient dismissed within six weeks from the date of his admission.

From Dr. Perry's Wards.

Reported by G. ROTHWELL ADAM, M.B., House Physician.

ANEURISM OF ABDOMINAL AORTA—DIETETIC TREATMENT— IODIDE OF POTASSIUM.—G. H., et. 42, a night watchman, was admitted to the Royal Infirmary, January 9th, 1879, complaining of a pulsating swelling in the abdomen. The patient has been a soldier, on foreign service for some years, but was discharged as unfit for work. After this he was employed as night watchman in a lunatic asylum. He states that so far back as 1866 he noticed a pulsating tumour, but suffered little inconvenience or pain from it. Eighteen months ago he first began to feel pain shooting through to the back. This pain is not constant, but comes on in paroxysms, which are aggravated by exercise. He has on one or two occasions lately passed blood by the bowel. (He was discharged from the army as unfit for duty, suffering from enlarged liver and cardiac disease, in 1866.) The cervical glands and those of the groin are enlarged and shotty, but beyond this there is no evidence of specific disease. About an inch and a half above the umbilicus, and to the left side, there is a distinct pulsating tumour, which is expansile and dull on percussion. Its transverse diameter is about two inches. On auscultating over the swelling, a rough, rasping bruit is heard. In either femoral artery, just below Poupart's ligament, a murmur is heard, which is more distinct on the right side. The subclavian vessels appear to be dilated, and the pulse at the radial arteries differs on the two sides. The heart is slightly enlarged, the apex beat being felt at the lower border of the sixth rib. On auscultating the heart, a double murmur is heard at the base, and also at the apex.

The treatment adopted in this case has been dietetic, combined with rest, and the exhibition of iodide of potassium. His dietary consists of—For breakfast, an egg, with a small quantity of milk and bread; for dinner, half a pound of steak, with milk, and occasionally potatoes and other vegetables; for supper, the same as breakfast. He is kept in bed, in the recumbent posture. Of the iodide of potassium he gets twenty grains thrice daily. Since his admission, under this treatment he has improved. The pulsation and expansile movement have considerably diminished, and the consistence of the tumour is firmer. The patient is himself sensible of his improvement, keeps in good general health, and is cheerful.

WESTERN INFIRMARY.

UNDER THE SUPERVISION OF DR. W. G. DUN.

FROM DR. MACLEOD'S WARDS.

EPISPADIUS-FAILURE OF FIRST OPERATION-SECOND OPERA-TION-PRESENT CONDITION OF PATIENT .- H. W., aged 17, was admitted on 29th October, 1878. Patient was much emaciated, and had been confined to bed for five months. On admission, his legs were locked together in such a manner as to protect the pubic region from pressure; and in order to undo this locking, it was necessary to put him under chloroform. The penis was found to be so far retracted as almost to have disappeared under the arch of the pubis; on traction being made, it was seen that the urethra was open along its upper surface from the base of the glans penis to the symphysis pubis, under which it passed by a tunnel-like opening into the bladder. The finger could be passed by this opening into the bladder, but no protrusion of the viscus existed. The urethral canal formed a well marked gutter, but it did not penetrate the glans penis. The urine continually escaped from the opening at the base of the penis, and caused some degree of excoriation, and lately the evacuation of the bladder had been attended with considerable pain. The testicles were fairly developed, and normally placed. The penis was abnormally shortened, and the foreskin hung down loosely below the glans. The tissues in the middle line were very thin and cicatricial, apparently caused by a previous operation, three years ago, in the Paisley Infirmary.

On 20th November patient was operated upon. The penis was withdrawn from the hollow into which it had sunk, and held forward. A square flap of skin and cellular tissue was dissected from the abdomen and turned downwards. The edges of the urethral groove were freely incised, and the edges of the flap referred to were carefully laid into the groove upon either side, and fixed with catgut sutures. The edges of the wound above the pubes were approximated with wire sutures. A flap was next raised from the front of the scrotum, underneath the root of the penis, and an opening being made in the centre of the base of that flap, the penis was passed through this opening, and the flap adjusted on the top of the previous abdominal flap (which had been laid with its raw surface upwards) and fixed with wire sutures. The wound in the scrotum was carefully brought together. It will thus be observed that the abdominal flap was turned with its external surface towards the urethral surface i. e., downwards—while the scrotal flap was made to ride over it, its raw surface being placed in contact with the raw surface of the abdominal flap. Holt's winged catheter was passed into the bladder, and the wound dressed with carbolic dressings. The dressings were changed every second day; but on the 27th, part of the scrotal flap had commenced to slough. On 19th December the following note was made—"The state of matters is not satisfactory, the scrotal flap having sloughed, and the abdominal flap drawn itself up, so that a good result cannot now be looked for." Dr. Macleod determined now to establish an opening into the urethra from the perinæum, with the view of removing the irritation produced by the urine (which had been the cause of the sloughing), and permitting the abdominal wound to heal, thereby rendering a subsequent operation probably more successful. This was accordingly done on 15th January, and a flexible catheter was passed into the bladder; in about ten days the instrument had made a channel for itself, and the urine came either along or through the tube.

January 29th.—Patient was again operated upon to-day. On examining the parts, it was seen that only a very small portion of the scrotal flap remained, and the scrotum presented almost no appearance of a flap having been taken from it. Immediately above the symphysis pubis was a granulating surface of about two square inches. The condition of the penis was as before described.

A flap was now taken from either side, at the root of the penis, and carefully adjusted in the middle line by wire sutures. What remained of the former abdominal flap was utilized, and

the groove in the penis itself was not touched, the object being

to close the sub-pubic orifice.

February 11th.—The wounds made on the 29th ult. are healed, and the object thus aimed at has been wholly attained. Dr. Macleod now proposes to close the groove in the urethra, in which he anticipates no difficulty. The patient's health has greatly improved.

MALIGNANT DISEASE OF RECTUM—FORMATION OF ARTIFICIAL ANUS IN RIGHT GROIN—RESULTS OF OPERATION.—R. P., aged 29, admitted 21st January, 1879; patient has a very emaciated and cachectic appearance. Till about two and a half years ago his health was excellent. At that time he began to lose flesh, and suffered from constipation and flatulence. The alvine evacuations were semi-fluid and streaked with blood and mucus, the latter forming often the sole discharge. constipation increasing, he consulted a medical man, who examined him and informed him that a large hard mass existed in the large bowel about three or four inches above the anus. He at once entered the Liverpool Royal Infirmary, and there had bougies passed per rectum. After this, violent pain began to be felt in the left side and over the sacrum, and pain has continued constantly present ever since. Patient states that he is in the habit of having at intervals of three or four weeks a passage of fæculent matter in considerable quantity, and in shape compressed laterally, or "ribbon shaped." In the intervals there passes daily a small quantity of thin, acrid, ill-smelling mucus, occasionally tinged with blood. He has never vomited. For eighteen months he has been taking large doses of opium, gradually increasing the quantity till now he consumes from four to five grains of morphia daily, and occasionally he has taken as much as eight grains, either by the mouth or subcutaneously. He has been taking almost no fluid for some months, and has refrained from food as far as possible. The pain complained of is dull, gnawing, and persistent. There is a general fulness of the abdomen, and in the left iliac region a hard nodular tumour is felt. On 23rd January Dr. Macleod examined the rectum with the finger, the patient being under chloroform, and found, three inches from the anus, a hard ulcerated mass surrounding the wall of the rectum and constricting its calibre. The finger passed into a narrow orifice with some difficulty. mass being evidently malignant, and almost closing the bowel, the formation of an artificial anus was proposed, as the only means of giving relief to the patient and prolonging his life.

From a consideration of the various circumstances of the case. especially the extent of the disease up the colon, the most suitable operation appeared to be that of opening the bowel in the right iliac region, according to the method of Nélaton. On 29th January the operation was performed; a portion of the small intestine presenting at the wound, it was secured by four stitches, the bowel being punctured between them, and the sides of the opening in the intestine fixed to the edges of the peritoneum and abdominal wound with great care. The operation was performed under the spray, and with all the customary antiseptic precautions. There was no bleeding and little disturbance of parts. Dr. Macleod remarked upon the advisability of seizing at once upon the first portion of the intestine which presented—whatever it might be, no attempt should be made at selection; the opening into the bowel should also, he said, be small, not more than a quarter of an inch in length.

The subsequent progress of the case has been quite satisfactory as far as regards the operation. The distension of the abdomen has disappeared, and the griping pains in the intestines have also ceased. A free discharge of fluid fæces takes place from the right groin, but there is a considerable amount of excoriation around the opening. Patient is able to take nourishment freely, but still complains of the pain over the sacrum which is due to the original disease. His aspect has improved, and he uses but little opium. His temperature was not affected by the operation, and the sutures were removed within a week—the lips of the wound being found quite

secure against infiltration.

NECROSIS OF OS CALCIS—AMPUTATION OF FOOT—NECROSIS OF TIBIA—REMOVAL OF DEAD BONE, AND GROWTH OF NEW BONE.

—A. W., carter, aged 40, was admitted first on February, 1876, with thickening of the tendo Achillis; blisters were applied, and patient was dismissed well on 10th March. On 24th April, 1877, he was re-admitted for abscess over the heel. This was opened, but no evidence of diseased bone was made out, and he was shortly afterwards dismissed improved. On 22nd August, 1877, he was again admitted for necrosis of the os calcis, and had the foot amputated by Roux's method; on 3rd October he was dismissed well. Some time after, however, a sinus in the cicatrix began to discharge, and a little ulcer formed, which gradually increased in size. On 9th December, 1878, patient was again admitted, and on 13th December the stump was opened up, the old line of wound being followed,

and the heel flap let down like a lid. All the sinuses were found to lead to the sawn end of the bone. The centre of the shaft of the tibia was carious, and before all affected bone had been removed, 53 inches of the shaft had been scooped completely out. The outer shell of bone was sound, and not interfered with. Chloride of zinc was freely applied to the inside of the tibia, and on the raw surface of the stump, which was closed as before with sutures, good drainage being secured by a large tube passing up into the cavity of the bone. The patient being thin and weak, full diet was ordered, and in addition 9 grs. of quinine and 4 oz. of sherry daily. The stump has been regularly dressed since the date of the operation, and is now looking very well; the amount of discharge is triffing. The point, however, to which it is desired to direct attention is the growth of new bone inside the shell of sound bone left untouched at the operation. The large cavity formed by the removal of the dead bone is now in great part occupied by sound bone, and the prospect is, that instead of amputation requiring to be performed immediately below the knee, a serviceable limb will be left to the patient, and the old stump retained.

NECROSIS OF TIBIA—EXTENSIVE REMOVAL OF SHAFT OF TIBIA, FOLLOWED BY GROWTH OF NEW BONE.—The case of W. C., aged 13, admitted 13th March, 1878, is a further illustration of the fact above adverted to. The patient, who was highly strumous, was by no means in a good state of health, and there was evident consolidation of the apex of the left lung. In this case a large sequestrum was removed, on 20th March, from the right tibia, and after all the dead bone had been taken away it was found that the interior of the shaft of the bone had been removed to the extent of 4 inches, the cavity extending downwards to the epiphysis, only a thin outer shell of bone being left. The patient remained in the hospital till 14th June; by this time the sinus was almost closed, and the tibia had become consolidated. He presented himself some months later for inspection, the sinus was now closed, and the boy was able to walk about quite freely. There was no thickening, and the limb was quite shapely. The boy's general health was greatly improved.

FROM DR. FINLAYSON'S WARDS.

TUBERCULAR MENINGITIS IN AN ADULT—PROGRESS OF CASE—DEATH—POST-MORTEM APPEARANCES.—K. M'L., aged 24, was

admitted 20th January, 1879, with symptoms of advanced pulmonary phthisis of about two years' duration. There was great flattening of the chest, especially on the left side, percussion at the left apex was dull, and, on auscultation, rales were heard over a large area on the left side; at the outer part of the subclavicular space, the respiratory murmur was loud and cavernous, and the râles here had a cavernous quality. The sputum, which was streaked with blood, was found, on examination, to contain lung tissue. In addition to the complaints of pain in the chest, cough, spit, and general weakness, patient also complained of severe and persistent headache, referred to the forehead, and coming on about a fortnight before admission. He had also a great tendency to vomit when the cough was bad, but for some time before admission the sickness did not seem to be connected with the cough. His gait was staggering, and the power of vision impaired. Grave fears were entertained of the headache being due to meningitis, and when it was found that this was associated not only with a little sickness, but with staggering on attempting to stand, the diagnosis of tubercular meningitis was regarded as almost certain, particularly when, on the following day, the temperature was found to be falling. For a few days after admission patient seemed a little strange, but it was only on the afternoon of 24th January, or during the course of the night, that marked delirium supervened. On the following morning he appeared quite unconscious of his surroundings, and could with difficulty be restrained, frequently insisting on getting out of bed. The bowels, which were constipated, were acted upon by an injection, purgatives given by the mouth having been vomited. The state of the abdomen seemed pretty natural, being neither distended nor retracted. A red streak was produced on drawing the finger over the skin of the abdomen, this was not, however, very pronounced. There was no squinting, but slight inequality of the pupils: on the previous day it had been noticed that the pupils did not respond properly to light. The pulse was perfeetly regular, but varied in frequency at different observations. The urine was free from albumen. The head was ordered to be shaved, and kept cool with ice if it felt warm. To have iodide and bromide of potassium, with occasional doses of chloral. The condition of the patient continued getting worse, the delirium and restlessness increased, at times he was very outrageous; the chloral quieted him, but he had no lengthened period of sleep. The vomiting, which had been a marked feature in the case, ceased on the 23rd. He seemed to suffer

considerable pain when he was taken hold of, when the bed clothes were being changed, and it was also noticed that there was stiffness about the back and back of the neck when he was raised up in bed. The right pupil was larger than the left, and they did not respond readily, but oscillated somewhat under the stimulus of light. There did not, however, appear to be any great intolerance of light. On the 28th, patient became quieter, and seemed a little more intelligent, but soon again lapsed into his former state of insensibility. The motions were passed in bed. The pupils were dilated. There were never any convulsions or squinting. On the 29th he seemed fast sinking. The urine required to be drawn off by catheter, and the abdomen became considerably distended and tympanitic. The pupils were still dilated and insensible to light. examination of the chest showed that the mischief there was fast advancing. Death took place this evening.

With regard to the temperature and pulse. The temperature, which was on admission 102°, continued high for three days, and then fell to 101°. On the supervention of decided symptoms of meningitis it fell still further, becoming nearly normal; towards the close of the case, however, a slight rise of the temperature to a little over 100° again occurred. The pulse was perfectly regular, but varied in frequency at different observations; it diminished in rapidity with the fall of the temperature, but never went below 60 or 70. Towards the end of the case it again rose, becoming very rapid during the last two

days, getting up to over 140.

Permission was obtained to examine only the head. The following is Dr. Coats' report:—The brain presented the usual appearances of tubercular meningitis of a comparatively mild degree. The surface of the convolutions was slightly glazed. The lateral ventricles contained a considerable excess of fluid, and the corpus callosum and fornix were soft and diffluent. At the base there was an exudation, but not very abundant. It partially concealed the optic chiasma, and extended into the fissures of Sylvius, and the anterior longitudinal fissure, gluing the opposing lobes very firmly together. It also extended over the surface of the pons and upper surface of the cerebellum. The exudation was gray, and there was none of the greenishyellow colour often seen in tubercular meningitis. No tubercles could be detected with the naked eye, but on placing a little piece of pia mater with exudation in salt solution, and separating the vessels with needles, abundant minute tubercles were detected adherent to the smaller arteries, and in their external coat.

From Dr. Gairdner's Wards.

DILATED STOMACH-SUCCESSFUL TREATMENT BY SALICYLIC ACID, AND MECHANICAL EMPTYING OF THE STOMACH.—G. C., aged 29, ship carpenter, was admitted on 2nd December, 1878, with evident symptoms of distended stomach. The history of gastric disorder extended back to November, 1875, when patient began to suffer from painful dyspeptic symptoms, and the pain continuing to increase in severity, his health commenced to fail. His bowels, previously regular, had become very constipated, and he dated the constipation from the time he first felt pain. He had also a feeling of distension after meals, but not at this time any sickness. The next phase of his disease was marked by the commencement of vomiting. This was in April, 1876. The very first time this took place he was greatly surprised at the quantity of matter, and arrived spontaneously at the conclusion that more came out of the stomach than he could have supposed to have been in it, judging from the food he had taken. The vomited matter had a sour smell, and somewhat of a yeasty character. There was no blood in it, and no bile. In July, 1876, he entered the Adelaide Hospital, Melbourne, chiefly on account of the obstinate constipation, the bowels being almost completely closed. The vomiting at this time was so frequent that, in fact, nothing would lie on his stomach. In the hospital he was treated by frequent purgative injections, from which he obtained great relief, both as regards the constipation and the vomiting. He left the hospital in December, and sailed for London in February. Shortly after this the vomiting commenced again, and the progress of the case since may be described as generally subject to remissions and exacerbations, marked chiefly by greater or less frequency in the vomiting. When questioned about blood in the vomited matter patient stated, that blood in any quantity had never appeared, but that when he had been retching considerably, previous to vomiting, the first quantity vomited was frequently streaked with blood. It is not clear that there has ever at any time been a discharge downwards of blood by the stools. During his residence in Adelaide Hospital he first became conscious that the movements of the stomach could be observed on the abdominal wall.

When admitted to the Western Infirmary there was a pretty general distension of the abdomen; greater, however, about the lower umbilical region, and from this on either side; a feeling of elastic resistance was communicated to the hand, corresponding generally to the distension; the percussion was tympanitic throughout. Waves of distension were observed to occur over large areas of the distended region, proceeding generally from left to right, and not unfrequently a bellying up of the whole umbilical region—more, however, of its lower than its upper part—was also noticed. When succussion was practised, with the hands placed over the abdomen, a large mass of fluid was felt to undulate from one side to the other, at a level exactly corresponding with the wave-like movement above indicated. When patient lay on his back there was no very obviously dull space on the abdomen at all, but when he lay on either side a large amount of dull percussion seemed to gravitate to the side, between the umbilicus and the anterior superior iliac spine. The evidence of greatly dilated stomach Dr. Gairdner therefore

regarded as unusually complete.

The treatment first adopted was the administration of salicylic acid, 5 grains, three times a day, after meals. This seemed to check fermentation and delay vomiting. Sarcinæ, which had previously been abundantly present in the vomited matter, were now absent. Shortly afterwards, emptying of the stomach, by means of the stomach pump tube, used as a syphon, according to Kussmaul's method, was also resorted to, the salicylic acid being still continued. At first there was some difficulty in the use of the tube, but this was soon overcome, and it was regularly used, on an average, every second day. Great improvement followed this treatment in the whole of the symptoms of the case; costiveness, though still a feature of the case, diminished; and as patient felt much stronger and looked better in every way, the presumption is that his food is actually better digested, and passes the pylorus in greater amount than before. He was dismissed, with instructions to carry on the treatment outside.

There is at present another case in the hospital, which seems an undoubted case of ulceration of the stomach, with equivocal signs of dilatation. This case is not suited for mechanical emptying, and Dr. Gairdner has ordered a trial of Carlsbad salts, a remedy recommended by Ziemssen as useful in gastric

catarrh and incipient ulcer.

Remarking on these cases, Dr. Gairdner said that the greatest number of cases of permanent dilatation of the stomach are due to cancer of the pylorus, and that such cases cannot be expected to be permanently benefited by mechanical emptying of the organ. But besides these, there is a certain number of cases due to other causes, such as cicatrizing ulcer near the pylorus, severe gastric catarrh, and a third class due to mere coarse

feeding, or habitual over-distension, causing atony of the muscular coat of the stomach. Cases belonging to those three classes may with advantage be treated by emptying; and the advantage gained is not merely palliative, but curative, allowing the stomach to get collapsed and the muscles to get into a state of renewed tonicity. Dr. Gairdner further drew attention to the fact that ulcer in the neighbourhood of the pylorus, or even states of great irritation of the mucous membrane, cause, through reflex action, a state of more or less rigid spasm of the pyloric sphincter muscle, which, by detaining the alimentary matters in the stomach until fermentation takes place, reacts upon the irritated surface, and prevents any ulceration that may exist from healing, even when originally simple and disposed to heal. Hence the comfort afforded in many such cases by purgative medicine, which, by increasing the downward action of the whole intestinal tract, and stimulating the motor nerves derived from the coliac plexus, tends to empty the stomach and avert gastric dilatation. The Carlsbad-Sprudel salts, which is composed principally of sulphate of soda, with a proportion of bicarbonate, is advocated by Ziemssen, partly as a laxative and partly as tending to correct the preternatural acidity of the gastric contents.

TOWN'S HOSPITAL.

DR. ALEX. ROBERTSON, PHYSICIAN.

Reported by Mr. EDWIN J. REILLY.

PUERPERAL ECLAMPSIA—TREATMENT BY VENESECTION, &c. —RECOVERY.—F. A., aged 19, of robust constitution and florid aspect, was admitted into the Town's Hospital, in labour, at

6 P.M. on 4th February, 1879.

There is nothing worthy of note regarding the actual labour, beyond patient being somewhat hysterical, laughing and crying alternately, during her confinement. The membranes had ruptured prior to her admission into the obstetric ward, and upon examination the os was found to be fully dilated and the presentation normal. The labour terminated apparently favourably at 11:30 P.M., when the patient fell asleep, occasionally waking between this hour and 4 A.M., and indulging in a fit of crying. There is a family history of insanity upon the father's side. I received notice at 4 A.M. that patient was in a

convulsion fit, the spasmodic movements of which, however, had ceased before my arrival. I then found patient lying semi-conscious, with respiration somewhat stertorous, pupils widely dilated, and the pulse full and rapid. In ten minutes she regained consciousness. Two drops of croton oil were now administered, and an evaporating lotion applied to the forehead, in order to relieve heat and pain complained of for the first time. At 6 A.M., two hours after the first seizure, a second fit occurred, attended with more violent convulsive movements than seemingly characterised the first.

Dr. Robertson was at once called. The bowels not having acted, the above dose of croton oil was repeated, 30 grs. of chloral hydrate exhibited, and the hair removed. Two more fits occurred, one at 7.25 A.M., the other at 8.45 A.M. Shortly after 9 o'clock, the bowels being still unmoved, a cathartic enema was given, which acted copiously in a few minutes. The free evacuation of the bowels was followed by three more attacks, occurring at intervals of about ten minutes. Between the second last and last (the eighth in all) a period of half-an-

hour elapsed.

Dr. Robertson now ordered 20 grs. of chloral hydrate, and the cold douche to the head, and he cupped the nape of the neck, abstracting some two ounces of blood. This treatment was followed by no perceptible improvement; but on the contrary, the patient became more profoundly comatose, and

the pupils contracted almost to a pin's point.

Dr. Robertson then determined upon venesection, which was performed at 11:30 A.M., withdrawing about sixteen ounces of blood. The operation resulted in rapid dilatation of the pupils, the breathing becoming less labouring, and reflex action partially restored, as tested by the sensitiveness of the conjunctive, &c. Towards evening consciousness was regained. Convalescence afterwards progressed uninterruptedly; and patient has since made a complete recovery.

It only remains to be remarked that there was no ædema of the legs or other indication of general dropsy: and the urine, which was not obtained until after the disorder had subsided, was found to be slightly albuminous, and to contain both

granular and hyaline tube-casts.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1878–79.
Meeting V.—20th Dec., 1878.

Dr. Fergus, President, in the Chair.

I. MINER'S NYSTAGMA.

Mr. J. C. Renton read Notes on Miner's Nystagmus, which

will be found at p. 202, and showed a patient.

Dr. Perry said that he had seen the affection in miners admitted to the hospital for other diseases. No treatment was given, but in all the cases the enforced rest was markedly beneficial.

II. AN APPARATUS FOR MEDICINAL INHALATIONS.

Dr. Adams read On an Improved Apparatus for Medicinal

Inhalations. See p. 182.

Dr. Perry said that Dr. Adams, far from exaggerating the faults of Siegle's original apparatus, had really understated them. The safety valve was a serious objection, as it was liable to be displaced. On one or two occasions he had known the whole thing to be blown up, and the patients peremptorily declining to use such an unsafe contrivance. The new method of concentrating the spray was a decided improvement.

Mr. Clark said that he well remembered, when in the smallpox hospital, after the introduction of Dr. Adams' improved apparatus, they were used in the hospital with advantage; but they had to be discontinued in face of the injunction from the Sheriff. They had then to do without inhaling apparatus, as Siegle's was too expensive for them. In regard to the addition to the Adams' apparatus, he was confident that he had seen a similar contrivance figured in an American magazine.

Dr. Glaister said all patents on medical and surgical apparatus should be reprobated, and instanced Chamberlain's midwifery forceps as a well known instance of such a patent. His objection to the conical contrivance for directing the spray was that it would involve great loss of material, as only a small quantity of the spray would be emitted at the apex.

Dr. Thomas said that he could testify to the therapeutic value of the inhalers, from seeing them so often tried in the Royal Infirmary. The cheapening of the apparatus was a great matter. He believed that the royalty exacted for the spray apparatus used by Mr. Lister was £2. In a large hospital it was a serious matter to pay a royalty like that,

as so many of them had to be provided.

Dr. Adams said that the whole aim of his paper was to decry the commercial spirit, as that spirit was illustrated in the proceedings to which he had referred. He could speak with some authority as to the tone of feeling pervading the profession, he himself being the only original member of the Society present, and he having held all the offices, and knowing well what the Society had done during its long career, and the spirit in which it had been in the habit of discussing such subjects. They had often discussed the merits of different instruments and apparatus, these merits being frequently looked at from the standpoint of economy and efficacy, and the absence of the commercial spirit. In regard to this matter of patents, the longer he considered it the more convinced he was of the demoralizing tendency of the practice, happily rather uncommon, of medical men shielding their inventions, as regards medical and surgical instruments and apparatus, under a monopoly.

III. FRACTURE OF NECK OF HUMERUS SIMULATING DISLOCATION.

DR. JOHNSTONE MACFIE read Notes of a Case illustrating the Simulation of Dislocation by old Fracture of the neck of the

Humerus, which will be found at p. 177.

Dr. Menzies said that in one case he tried in vain to reduce what he considered a dislocation of the humerus, and at last came to the conclusion that there could not be dislocation. About a month afterwards he was called in to the patient and found a dislocation backwards, a very rare occurrence. In all

these cases it was good to examine under chloroform.

After some remarks by Dr. Renton and Mr. Glaister, Dr. Hugh Thomson said that the essential treatment consisted in preventing the riding of the ends of the bones, which could best be done by a pad in the axilla. Fracture of the anatomical neck of the humerus must be very much the same in appearance as dislocation. In this case, besides the atrophy of the deltoid, there appeared to be some displacement of the lower fragment inwards.

Dr. Mache said that besides the atrophy, which was apparent (whether due to the apparatus employed or not), there was besides hardness in the axilla. The best mode of treatment would have been to support the scapula on to the clavicle. With regard to the riding of the ends of the bones, Mr. Hutchinson says that probably this did not take place, the parts being so bound down with the muscles.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Session 1878-79.
Meeting III.—Jan. 14th, 1879.

Dr. Alex. Robertson, President, in the Chair.

Dr. Joseph Coats showed a kidney in which Pyonephrosis AND HYDRONEPHROSIS existed together. The peculiarity in the case was that there were a number of cysts which did not communicate, some of which contained a sero-purulent fluid and some clear serum. Dr. Coats accounted for this peculiarity by the fact that the pelvis of the kidney was obliterated. The cysts which form in ordinary hydronephrosis communicate with each other at the pelvis; but here, as there is no pelvic cavity, they are shut off from each other. The other kidney was cirrhotic. Dr. Coats also showed the heart in this case, which presented very typically the HYPERTROPHY OF THE LEFT VENTRICLE of chronic Bright's disease. The heart weighed 14; ounces (8 or 9 being the normal), and the whole increase was from enlargement of the left ventricle. From the same case was also shown an ordinary ATHEROMATOUS CYST OF THE SCALP. The patient from whom these organs were removed died of cerebral hæmorrhage.

Dr. Gairdner, under whose care the patient was, said that during life the chief point of interest was as to the cause of certain new symptoms—coma and hemiplegia—which suddenly set in. Cerebral hemorrhage was diagnosed from the sudden onset with paralysis, from the degenerated condition of

the arteries generally, and from a rise in temperature.

Dr. H. C. Cameron showed a Pedunculated Exostosis From the Lower End of the Femur. He remarked that he had removed a number of exostoses having this pedunculated

form, and covered with cartilage like this one, but they had been from the distal phalanx of the great toe, or the edge of the scapula. Such exostoses also occurred near the upper end of the humerus. In the present case the peduncle was $1\frac{1}{2}$ inches in thickness, and he cut it through with the chisel and mallet, thus removing the tumour.

Dr. Gairdner showed a case of Duchenne's Pseudo-HYPERTROPHIC MUSCULAR PARALYSIS in a boy 9 years of age. This was only the second case he had seen in the Western Infirmary during these four years, and he had not noticed any perfectly clear case during the many years of his connection with the Royal Infirmary. It is, therefore, a very rare disease. The disease consisted in an enlargement of the muscles of the extremities, with a peculiar gait, unlike that from any other disease of the nerve-centres; a projection forward of the lumbar vertebræ gives the gait its very peculiar aspect. In the present case there was the history of a fall at the age of three years, and it was stated that the first signs of the disease made their appearance six months afterwards. It is possible, however, that, as the disease is very slow in its onset, the fall may have been the effect of the disease rather than the cause. This gradual onset of the disease taken along with the fact that the intelligence is not much, if at all affected, makes the position of children affected with it a very painful one. They desire to mingle in the sports of their companions, and endeayour to do so, but the other children, not understanding the condition of the child, often take advantage of his tendency to lose his balance, and thus make him the subject of very cruel sport. The tactile sense is not impaired, and the patient is quite able to stand steady with his eyes shut. In walking, the body is held with the shoulders projecting backwards, while the lumbar curvature causes prominence of the abdomen like that of a pregnant woman. This peculiar position is undoubtedly taken up in order to balance the body, the affected lumbar muscles being unable to hold the spine erect. When the patient is laid prone on the floor, the spinal curvature disappears. All these points were exhibited in this patient, and it was also shown that he found it impossible to mount on a chair, and that he very readily overbalanced himself. The general health is good. It was noted that the upper and lower limbs were not always, or even generally, in the same condition; it often happened that, with enlargement in the muscles of the lower limbs, there was atrophy in those of the upper.

Dr. Knox said that in the first case which he saw of this disease the patient found great difficulty in rising, and was easily knocked over. His school companions took a cruel advantage of this fact. The present case had been sent by him to Dr. Gairdner from the Dispensary of the Western Infirmary, to which the patient had been advised to go in

order to get Sayre's jacket applied.

Dr. Comeron said that this case was a kind of revelation to him. He had put a Sayre's jacket on a child recently who walked very like this one. It was supposed to be a case of vertebral disease or morbus coxe, but he was very much inclined to think it might be a case of this disease. His patient lurched considerably to the side, and there was some swelling of the left thigh, as well as of the buttock. He had not examined the calves of the legs, but the buttocks felt very much like this boy's calves. He would like to know if there was ever unilateral swelling of the muscles.

Dr. Finlayson said he thought the swelling of the muscles was always symmetrical, and that Dr. Cameron's case, on that account, was not likely to be one of this disease. A simple lordosis would account for difficulty of rising, and also the peculiar gait. Care should be taken to exclude from this disease cases of simple obesity, in which there was swelling of

all the limbs from adipose tissue.

Dr. Robertson remarked on the backward state of the education in this patient, and asked if Dr. Gairdner thought the intelligence defective? Dr. Gairdner considered that, taking into account the disadvantages such patients labour under, there was no evidence of defective intellect. Dr. Robertson also referred to observations by Dr. Wilks, in which the temperature of the calves was increased as compared with that of corresponding parts of the body, and suggested that this might be related to active changes going on in the muscles, resulting in an increased production of connective tissue. The electric irritability is decreased in these cases, along with the loss of power. He also referred to the observations of Lockhart Clarke, according to which there was disease of the anterior grey cornua of the spinal cord.

Mr. W. J. Fleming said that he remembered having seen some rabbits in which the sympathetic nerve in the neck had been cut, and the animals lived some time. There was great hypertrophy of the ear. He suggested that in Duchenne's

disease there might be something of this.

Dr. Joseph Coats pointed out that in this disease there is a real atrophy of the muscle, with an increase of adipose tissue

between the muscular elements. It sometimes happened that in particular parts there was a simple atrophy without any increase of adipose tissue, and he could understand that a case like that of Dr. Cameron might be of this kind, there being simple atrophy on one side, and atrophy with enlargement from adipose tissue on the other.

DR. ROBERT W. FORREST described a CASE OF TUBERCULAR PERITONITIS TERMINATING IN RECOVERY. He also showed a chart in which the temperature and treatment were recorded. This case will be found at length at p. 198. In connection with it, Dr. George Buchanan sent a chart of the temperatures in the case of peritonitis following ovariotomy, which is recorded in our February number, p. 122.

Dr. Gairdner, after complimenting Dr. Forrest on the care shown in observing this case, commented on the complexity of the drugs used, and suspected that the cerebral attack might be due to more than the salicin. He had seen many cases of

tubercular peritonitis ending in recovery.

Dr. Finlayson said that he had seen the case on several occasions, and had no doubt that it was one of tubercular peritonitis. He had traced cases of tubercular meningitis, in which a decreasing temperature was the prelude to a fatal issue; but here we had a case with symptoms which might possibly be due to meningitis, in which the temperature first fell, but then rose again, and the patient recovered. Cerebral symptoms sometimes occurred in the course of treatment with the salicylates, but marked decrease of temperature had rarely been seen in phthisical cases under the use of salicylic acid, either by himself or the various Continental observers who had written on phthisical temperatures.

Dr. M'Call Anderson complimented Dr. Forrest on his case. Salicin in large doses in rheumatic fever cured the rheumatism, and so reduced the temperature. But as a simple antipyretic he did not regard it as at all reliable. Cases of rheumatic fever occurred in which the temperature increased although the pain was relieved. In Dr. Forrest's case the iced water cloths had not quite a fair trial; instead of one hour each day they should have been used every alternate half-hour, night

and day, till the temperature came down.

Dr. Joseph Coats deprecated the condemnation of salicin and the salicylates so summarily as Dr. M'Call Anderson seemed inclined to do. He had made observations in certain cases of tubercular peritonitis and acute phthisis, and had been able to control the temperature with salicylate of soda. He regarded

these agents as real reducers of temperature.

Dr. Gairdner also agreed as to the antipyretic effect of the salicylates, and related a case of pleurisy, in which this effect followed. But in regard to this and other antipyretics he would ask, Did reduction of temperature cure the disease?

Dr. Robertson had found salicin a weak antipyretic but a powerful anti-rheumatic. In regard to the curability of tubercular peritonitis, Mr. Spencer Wells had opened the abdomen in a case, and found it studded with miliary tubercles. The patient recovered, so that there was no doubt of the diagnosis and of the reality of the cure.

Dr. Joseph Coats showed the right half of the scrotum, in which there was a Spermatocele. There was a large cyst behind and above the tunica vaginalis, and smaller cysts at the epidydimis. These cysts evidently sprung from the epidydimis, and the large one contained an opaline fluid swarming with spermatozoa, some of which were shown under the microscopes.

Dr. Foulis said the case was evidently one of encysted hydrocele, of which the frequency was greater than many imagined. He thought that the cases of hydrocele, in which injection with iodine apparently failed, might be cases in which there were several cysts, the smaller ones growing larger after the obliteration of the principal ones.

DR. DUNLOP showed a case of MENINGITIS OF THE CORD CAUSED BY PENETRATION OF A FISH-BONE INTO THE SPINAL CANAL. The case was that of a man, aged 20, who, at supper, on 18th December, allowed a fish-bone with a very sharp edge to become impacted in his pharynx. He came to the hospital and had the fish-bone removed by Mr. Williams, and went home much relieved. Next day he returned with stiffness and pain in the right side of the neck, and a certain tottering gait. The pain increased, and had the character of shooting pains down the spinal column; and the tendency to stagger became more marked. There was tenderness on pressure over the nape of the neck, and the right sterno-mastoid was in a state of painful contraction. On the morning of 23rd December (five days after the impaction), delirium occurred, and he suddenly became comatose, and died in half an hour.

Dr. Foulis examined the body, and found that the fish-bone had made its way into the spinal canal, partly through the first intervertebral cartilage, and partly through the right intervertebral foramen; it had punctured the spinal dura mater.

There was injection and a coating of lymph on the upper end of the spinal cord, near the wound, as well as injection and dulness of the membranes over the under surface of the cerebellum and medulla oblongata. The position of the inflammation, so near the respiratory and other centres in the medulla oblongata, as well as round the roots of the spinal accessory nerve, probably accounted for the tendency to wry-neck, and the suddenness of the fatal issue.

Dr. Gairdner showed a preparation from a case of completely HEALED ANGULAR CURVATURE OF THE CERVICAL SPINE. WITH LATE AND SUDDENLY FATAL PARALYSIS.—It was shown that the bodies of the 2nd, 3rd, and 4th cervical vertibre were atrophied, especially in front, so that the body of the 3rd vertebra had a wedge shape, the thin end forwards. In front of the bodies there was a piece of dense new formed bone, which had apparently taken the place of that destroyed by disease. By the atrophy of the bodies the spine was sharply curved, so that the canal at one part was scarcely a quarter of an inch in diameter. The patient had, nevertheless, served for 18 years in the army as an able soldier, probably after the disease in the spine had healed. He was discharged on account of "hemiplegia [probably a mistake for paraplegia], contracted while in the service." The history showed that the vertebral disease began about puberty, and that, at the age of 18, it was so far healed as to enable him to enlist and pass as a soldier. After his 18 years of service and discharge he fell into dissipated habits, and was admitted into the Western Infirmary in a state of stupor from intoxication. While there the upper limbs, and, to a less extent the lower, became paralyzed; and, as the intercostals and diaphragm followed, he died. There was no apparent cause for this sudden onset of the paralysis, unless it were that the intoxication had caused a congestion of the cord, and rendered it less capable of carrying on its conduction through the narrowed canal.

MEDICAL ITEMS.

UNDER THE DIRECTION OF

ALEX. NAPIER, M.D.

The Treatment of Chronic Albuminuria with Anasarca by Fuchsine, or the Hydrochloride of Rosaniline.

—"The cases of chronic albuminuria cured by this remedy,"

says M. Bouchut, of the Hôpital des Enfants-Malades, Paris, "are now sufficiently numerous to enable one to attach considerable importance to its use. The first cases were published in the Gazette Hebdomadaire, in 1876, by MM. Bergeron, Clouet, and J. Feltz. The others, reported by myself, have been published in the Gazette des Hôpitaux in 1877 and 1878." After referring to other recently recorded cases, M. Bouchut proceeds to give three additional. The first is headed "Chronic Albuminuria with Anasarca," and occurred in a girl 8 years of age. There were general cedema, considerable ascites, and puffiness of the face and evelids. There was also some diarrhea. The urine contained a large quantity of albumen (25 grammes per 1,000). Besides a daily "benzoin fumigation," she was ordered 15 centigrammes (about 21 grs.) of fuchsine per day, in an aromatic mixture. In a few days the dose was increased to 25 centigrammes (about 33 grs.), and already the albumen had somewhat diminished. As this increased dose was followed by sickness for a short time, the quantity was lessened. A fortnight later the cedema had almost quite gone, and the albumen was much diminished. When five weeks under this treatment—dose from 10-20 centigrammes (11-3 grs.) per day—the cedema was quite gone; quantity of albumen greatly lessened, some days altogether absent. The albumen soon disappeared, and after examining the urine daily for a fortnight, with no trace of albumen, patient was dismissed cured. M. Bouchut considers the sickness above noted a mere coincidence, and that the remedy is well borne even in larger doses than those we have mentioned, and that "it has here produced a cure in one of the most severe cases of chronic albuminuria that one could meet with." The next case is entitled "Acute Scarlatinal Albuminuria," the patient being a girl 7 years of age. During convalesence from scarlet fever, general anasarca appeared, with abundance of albumen in the urine. Ten centigrammes of fuchsine in pill were given daily for five days, when complete recovery took place. He admits that this case is not so conclusive. The third case is one of "Nephritis: Chronic Albuminuria with Anasarca," in a rather delicate girl of 14, with a previous history of typhoid fever, accompanied by marked cerebral symptoms, at 3 years About a month before admission there were indications of general tumidity of the body and lower limbs, and on admission it is noted that she is anomic, with cedema of lips and eyelids, which extends to the trunk, and is present in the legs to a marked extent. There is an abundant precipitate of albumen thrown down in the urine, both by nitric acid and heat. Patient was put on milk diet, with 15 centigrammes (24 grs.) of fuchsine per day in an aromatic mixture. June 25th, fourth day after admission.—The swelling in body and limbs has quite disappeared. Quantity of albumen much less. Urine of a rose colour, as in hematuria, this being evidently caused by the fuchsine. July 1st.—Same state. Dose increased to 20 centigrammes (about 3 grs.). July 10th.—Same state. Urine feebly albuminous; fuchsine 25 centigrammes (about 34 grs.). July 30th.—Milk diet stopped. Fuchsine, which had been increased to 30 centigrammes (about 41 grs.), now reduced to 25. August 1st.—Same state. Analysis of urine gives 13 grammes of albumen per litre. By the 16th August the albumen had disappeared. Dismissed cured on 2nd September, 1878. In two months patient had taken 15 or 16 grammes of fuchsine without any bad effect. The urine, which was coloured deeply red by the remedy, at once lost a considerable proportion of its albumen, by the end of six weeks there was a mere trace, and in two months it had quite disappeared.—Gazette des Hôpitaux, 21st January, 1879.—J. W. A.

[Most of the statements made above are confirmed by a case which has come to our knowledge, in which the albuminuria had lasted for some years, and at the commencement of treatment was such that, after boiling the urine with acid, the test tube could be inverted without spilling. The amount of albumen was very materially decreased under the use of fuchsine in doses of 20 to 50 milligrammes.—Ed. G. M. J.]

Citrate of Caffein as a Diuretic in Cardiac Dropsy.— Dr. L. Shapter is able to confirm fully Prof. Gubler's observations as to the diuretic powers of citrate of caffein. He is of opinion that this preparation, in doses of 3 to 6 grains, is a diuretic and cardiac stimulant of great value in those cases of cardiac dropsy in which a dilated, feeble, and irregularly acting heart, undergoing progressive mural decay, is the main clinical and pathological element to be contended against. In Dr. S.'s cases, as the drug showed a manifest tendency to induce nausea and vomiting, the dose was limited to 3 grains thrice daily, dissolved in water, and sweetened with glycerine. The patients, whose histories are here recorded, suffered from grave valvular and other disease of the heart, and dropsy of greater or less extent, and in all of them the use of the caffein was followed by profuse diuresis and rapid subsidence of the swelling, the latter symptom, in one instance, completely disappearing. The heart's action also became more regular and powerful, appetite improved, and a general condition of comfort was established in

an exceedingly short time. The author holds (1) that citrate of caffein is a diuretic or excitor of renal secretion, and (2) that it increases the heart's action, either (a) directly, by stimulating the organ itself, or (b) indirectly, by means of the arteries, which it also excites to further contraction. Both these latter effects are of great interest and importance; probably the first of them, stimulation of the heart itself, is produced through the agency of the sympathetic system, and specially of the intrinsic cardiac ganglia. In exciting the arterial vessels to contraction, caffein probably acts by overcoming the controlling effect of the splanchnic nerve, and, through this medium, that of the abdominal vascular system generally.—The Practitioner, January, 1879.

To prevent Strangury, &c., from Absorption of Cantharidis.—For this purpose it is a common practice to dust the surface of the ordinary emp. lytte with powdered camphor. M. G. Dannecy, of Bordeaux, however, finds that this precaution often fails to protect the patient, and has for many years substituted for the camphor a mixture of carbonate or bicarbonate of soda and powdered cantharidis. He says, "the blistering plaster having been spread of the required size, its surface is to be dusted with a mixture of equal parts of carbonate of soda and powder of cantharidis; this is pressed well in with the hand to cause it to adhere, and the whole covered with thin oiled paper or silk." M. D. states that this application blisters very speedily, and has never, in his experience, given rise to unpleasant symptoms. He throws out the suggestion that an alkaline cantharidate is formed, but is unable to bring forward any experimental or other evidence in favour of the theory.—Bull. Général de Therap., 18th January, 1879.

Treatment of Alcoholism. Dr. F. P. Atkinson recognizes three stages in alcoholism. The first stage is characterised by sleeplessness, hard quick pulse, loss of appetite in the morning, morning sickness; this he treats by giving the following draught every four hours:—

Tr. Rhei. mx. Tr. Card. Co. 3ss. Tr. Hyoscyami, 3ss. Acid. Hydrocyan dil., miii. Spt. Chlorof. mxv. Aq. ad, 5i.

Abstinence from stimulants is strictly enjoined; if this be impossible, allow a glass of claret three times a day. Light and easily digestible food should be given. In the second stage, which is marked specially by drowsiness, slow, compressingly

sible pulse, complete loss of appetite, and constant vomiting, the same treatment is suitable, omitting the prussic acid from the draught. In the third stage, delirium tremens, chloral should be administered in 30-grain doses every four hours, till sleep comes on, and then repeated as often as necessary. If chloral is gone on with beyond a certain time, a sleepless condition recurs, when a draught containing tincture of nux vomica, and compound tincture of gentian should be given three or four times a day.—The Practitioner, January, 1879.

On the Reduction of certain Dislocations.—Mr. J. E. Kelly recently read before the Surgical Society of Ireland an interesting paper on the above subject. He first related a case in which a very simple expedient superseded anæsthesia. The patient, a powerful sailor, was suffering from sub-glenoid dislocation of the humerus, of several days' duration. Serious valvular disease, and some additional circumstances, contraindicated chloroform. Rotation, manipulation, extension in various directions having proved ineffectual, muscular resistance was overcome in the following way: -A pupil was privately armed with a wet towel, and directed at a given signal to slap the patient suddenly on the epigastrium. The heel was placed in the axilla and the signal given; the patient made a sudden and complete expiratory effort, and with very little extension the bone was replaced. Thus, by producing collapse of the thorax, the basis of muscular force, voluntary and spasmodic resistance may frequently be overcome.

Mr. K. then described another method by which he had reduced a dislocated humerus (infra-coracoid), without assistance. "After almost every other method had failed, I placed the patient on a bed, with the dislocated limb on the outside, and close to the edge. Turning my back to him, I got one trochanter well into his axilla, brought the dislocated humerus across the front of my pelvis, and hitched or flexed the fore-arm round the opposite ilium. By a single torsion or twist of my trunk, produced by some of its most powerful muscles, I made extension and abduction, while the weight of the patient afforded ample counter-extension." Reduction was effected easily. When the displacement is inferior, the author finds it more advantageous to lie across the patient while on the ground, and then to make the same movements. In applying this method, one hand is free, and may be used to manipulate the joint.

In Hey's luxation of the thumb, "extension merely lessens the inter-ligamentous space, while, if the dislocated phalanx be rotated forcibly and lateralized, so as to bring one extremity of the articular surface towards the centre of the space, the luxa-

tion may be reduced with the greatest facility."

Mr. Kelly then referred to femoral luxations, and gave details of a case of posterior displacement, occurring in a very strong man. Every other method having proved unsuccessful, the following manœuvre was practised:—"The patient was placed on his back on the floor, and his pelvis firmly fixed; I flexed his hip and knee, and placed his instep under my perinæum; bending forward, I passed my fore-arms under his knee, and grasped my elbows, then bringing the dorsal muscles with those of the lower extremities into action, I reduced the dislocation with little difficulty." A force of 300–800 lbs. may thus be exerted, in a manner easily regulated, while the surgeon's grasp is not taxed. Considerable circumduction may be combined with the force by swaying over the patient during the effort of extension.—Medical Press and Circular, January 29, 1879.

How to Manage Breech Presentations.—Dr. J. G. Thomas, in the course of a clinical lecture on the diseases of women, stated, that out of 25 cases of this presentation, he had not lost a single child. In this list were none of version by the feet; all were genuine, original breech cases. His success he attributed wholly to his method of treatment, which is as follows:—Having diagnosed the presentation, at once make every preparation for the delivery, then wait quietly till the breech comes down into the vagina. Do not hurry the early stages of such a case, and never put the finger (and still less a blunt hook) around the child's groin. But the instant that the presenting part distends the perinæum, the attendant's tactics should be entirely changed. Having placed the patient on her back across the bed, with her feet resting on two chairs, give one limb into the care of the nurse, and the other into that of an assistant, who keeps one of his hands free to assist as required. The chief principle in the delivery is this: that the force which is to expel the child must come from above, and not from below. Therefore, now give a large dose of ergot hypodermically, in order that it may produce a powerful effect on the uterus instantaneously. As soon as the cord comes within reach, get hold of it; then ask the assistant to press down upon the head with all his force, while the patient should be called upon, if she is not under chloroform, to bear down as strongly as possible. The result is usually a very speedy delivery. In a second or two a couple of fingers can be got into the child's mouth, and traction made by means of the inferior maxilla.—Med. and Surg. Reporter.

Treatment of Epithelioma of the Cervix Uteri.-In the same lecture, Professor Thomas described at length his method of treating cancer of the uterus. He deprecates strongly any attempt at amputation after the cancerous growth has passed the point of vaginal junction; he then trusts solely to local applications. "At this stage we can assist and relieve the patient not a little, and this is to be done mainly by controlling the hæmorrhage, which keeps up such a drain on her system. The best means for this is the local application of strong mineral acids, and the plan which I would advise is the following: A speculum having been introduced, the diseased surface of the cervix should be carefully cleaned with warm water, and afterwards dried with a sponge. The whole surface should next be saturated with chemically pure nitric acid, and then a tampon of cotton soaked in glycerine or vaseline inserted. In twenty-four hours the tampon should be removed, and after that detergent injections, for which carbolized water answers as well as anything else, should be kept up regularly. The application of the acid should be repeated perhaps once a month, or as often as called for." Professor Thomas speaks of the results of this plan of treatment with something akin to enthusiasm. He says that, though the extension of the disease is not arrested, the patient will undoubtedly grow stronger, the hæmorrhage will cease, and the time of the return of the menstrual flow can again be noted. "If you have not had much experience you will, in all probability, feel as if you had made an awful error in diagnosis."—Ibidem.

Rupture of the Perinæum.—This subject is ably discussed by Dr. G. Eustache, in the Bull. Gén. de Therap., Aug., 1878. After giving minute details of a case of complete rupture which he successfully treated, he formulates his views in the following words:—

1. Complete rupture of the perinaum is very often due to

deformity of the pelvis.

2. When it involves the recto-vaginal septum it never unites spontaneously; an operation is necessary.

3. Whenever possible, this operation should be performed

immediately after labour is over.

4. The septum should be restored by two series of interrupted silver sutures—the first bringing together the rectal edges of the rupture, the second closing the rent on the vaginal side. The perineal wound is then to be closed by means of the quilled suture.

5. The vaginal and rectal sutures should be continued down

to near the surface of the skin in the perinæum; the perinæal suture, prolonged backwards, completes the septum at its lower end.

6. The greatest attention must be devoted to the aftertreatment. The bladder is to be emptied regularly with the catheter; the vagina washed out three times daily with an aqueous solution of carbolic acid—these measures being carried out during the first eight days, when the stitches are to be removed. Opiates must be given to prevent the bowels acting for ten or fifteen days; then castor oil and an injection.

[We have lately seen a case very similar to that described by M. Eustache. In it the torn septum and perinæum were closed by a single series of interrupted sutures of silver wire. Much the same line of after-treatment was pursued—catheterism, washing out the vagina twice daily, and opiates. In addition, the patient was kept constantly on her side, to save the wound from the lochial discharge as far as possible. The result was complete union, with perfect control over the sphincter ani.—A.N.]

Extraordinary Birth.—Dr. J. Perrins, Boston, Mass., reports that, on 14th June, 1878, Mrs. J., a Swede, æt. 27, a primipara, weighing 135 pounds, was delivered instrumentally of an enormous child. "About 12 hours after birth the child was weighed and measured, with the following results:—Weight, 19¾ lbs.; height, 25¾ inches; circumference of head, 16¾ inches; neck, 9¾ inches; shoulders, 19¾ inches; hips, 17¾ inches; arm, humerus, 9¾ inches; thigh, 10¾ inches; length of neck, after all the pulling it got, 1 inch."—Med. Press and Circular, 5th Feb., 1879.

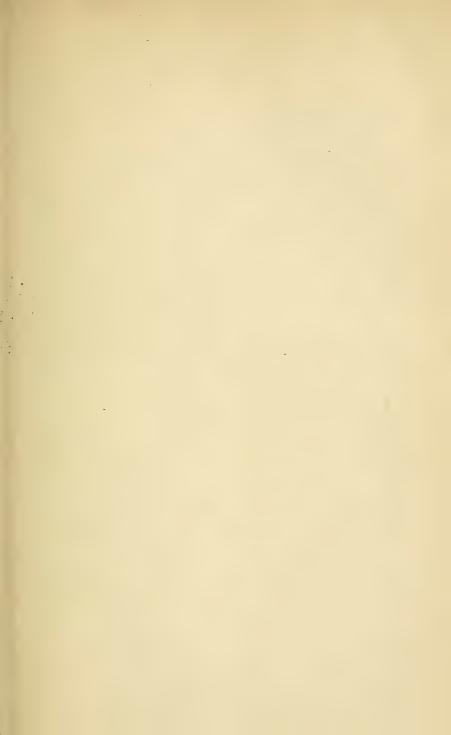
Operative Treatment of Incipient Pyæmia.—Dr. H. Kraussold records, in v. Langenbeck's Archiv. xxii, p. 965, a case of amputation immediately above the knee-joint; the manipulations necessary on account of repeated secondary hæmorrhage had deprived the wound of its strictly aseptic character, and pyæmia announced itself on the fourth day by a sharp rigor. As this was supposed to be due to purulent venous thrombosis, the veins which had been tied at the time of operation were opened, and a quantity of discoloured fluid and clot discharged from them. The vein at Poupart's ligament was at once laid bare, ligatured in two places, and a portion of it, measuring 2-3 ctm., removed; the femoral artery was also ligatured to prevent further bleeding. The temperature of the body at once sank to the normal point, and the

subsequent progress of the case was in every respect favourable. The operation, the application of a ligature to the vein, had been performed in several similar cases with the most satisfactory result.—Centralblatt f. d. Med. Wissensch, 18th January, 1879.

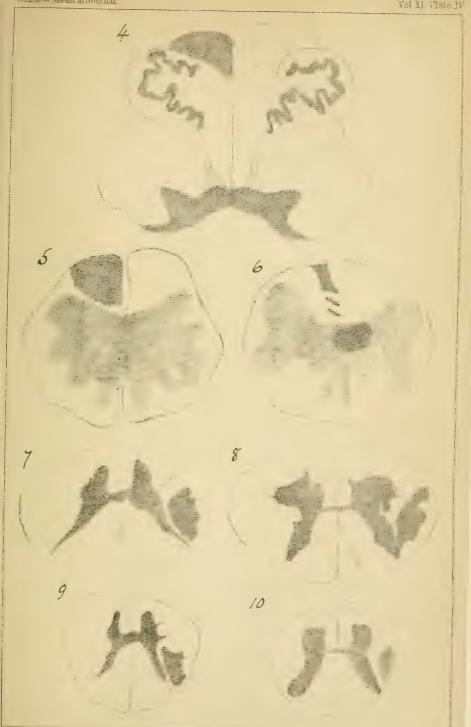
Rupture of the Diaphragm.—In the Vierteljahrsschr f. Gerichtl. Med., Dr. Bremme gives an account of a case of this kind. The patient, a man of 30 years, had eaten a very hearty meal, consisting, amongst other things, of four platefuls of potato soup, vinegar (as a relish), and "numerous" cups of tea and milk; this was followed by a large dose of bicarbonate of soda, to aid digestion! Immediately the stomach swelled enormously, there was great uneasiness, acute pain in the abdomen, a feeling of suffocation, fainting, and sudden death. Post-mortem examination revealed a rent in the diaphragm 25 ctm. long, and 15 ctm. wide, through which several coils of intestine and the liver had passed into the right pleural cavity. In the larynx, trachea, and air passages, a quantity of fluid food was found.—Centralblatt f. d. Med. Wiss., 4th January, 1879.

Salicylic Acid Eruption.—Among other unpleasant consequences of the use of salicylic acid in some constitutions, is an eruption of an urticarial character. Dr. F. Freudenburg describes a case in the Berlin Med. Wochenschrift (No. 42, 1878), where the whole back of the patient was covered with ecchymotic patches, which extended to the sides and chest. The acid was discontinued, and the eruption slowly disappeared, and was quite gone by the sixth day. The acid was then resumed, and again the eruption broke out, so that the medicine had to be definitely renounced. The patient was anomic, which may explain the hamorrhagic appearance of the spots.—Med. and Surg. Reporter, 4th Jan., 1879.

A Large Heart.—Mr. J. H. W. died in May, 1877, after an illness of nearly two years. His disease was diagnosed, during life, as hypertrophy of the heart, with valvular insufficiency. Examination of the heart, after death, revealed the following conditions:—Distance from apex of left ventricle to the origin of aorta, six and two-thirds inches; thickness of left ventricle, one and one-third inches; right ventricle, one-third of an inch; weight, forty-jour ounces.—Med. and Surg. Reporter, 5th Oct., 1878.











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ORIGINAL ARTICLES.

ON DESCENDING SECONDARY SCLEROSIS OF THE BRAIN AND SPINAL CORD IN A CASE OF HEMIPLEGIA.

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(With Three Lithographic Plates.)

(Communicated to the Glasgow Medico-Chirurgical Society, January 10, 1879.)

A CASE which occurred in the regular course of investigation at the Western Infirmary, Glasgow, presents in such a striking way the secondary changes in the successive portions of the nervous system which follow on the destruction of the motor strands in the basal ganglia of the brain, that it has been thought worthy of elaboration and fuller discussion. Since Türck published his papers in 1851 and 1853, it has been known that in cases of hemiplegia due to lesions in the region of the corpus striatum, there is a secondary degeneration of certain strands of nerve fibres in the cord. It is to be presumed that these strands are continuous with the parts injured. and by following them a means is offered whereby the course of the motor fibres, from the brain downwards, may be traced. In our present case we do not presume to offer anything absolutely new, but we shall adduce the facts obtained as evidence of the paths of conduction of motor impulses from the corpus striatum, or more correctly, the internal capsule onwards.

In the first place, it will be convenient to describe the case in its general aspects with the more obvious *post-mortem* appearances.

Mrs. M'D., 27 years of age at the time of death, was long under observation in the Western Infirmary, where full notes were taken at various times by Dr. Gairdner. In the report of the meeting of the Medico-Chirurgical Society, at which this paper was read,* will be found a description of the case in its clinical aspects, by Dr. Gairdner. It will be sufficient here to indicate the principal facts. She complained of symptoms of cardiac disease, but not in a very aggravated form, and there were distinct signs of mitral obstruction, with slowly increasing cardiac hypertrophy. She was attacked with hemiplegia (doubtless embolic) of the right side, three or four years before death, and the lesions to be described may be regarded as having their origin at that period. The paralysis was at first nearly complete in the arm and leg, and considerable in the face. There was a slow and very partial recovery, especially of the leg and upper arm. The fingers, however, became permanently rigid and bent into the palm (late rigidity). immediate cause of death was pleurisy and pericarditis, the disease of the mitral valve being, no doubt, concerned in the fatal issue.

The post-mortem examination showed great contraction of the mitral orifice. The curtains of the valve were thickened and their edges adherent, so as to form a rigid funnel, at the apex of which was the narrowed aperture, only large enough to admit the tip of the finger. The margins of the aperture were rough, with slight deposition of fibrine. The pericardium was coated with soft fibrine from recent pericarditis. The left pleura was similarly coated, and contained a few ounces of fluid. In the left lung there were one or two hemorrhagic

infarctions (the probable origin of the pleurisy).

Interest attached chiefly to the central nervous system, and it was first carefully observed in the fresh state. The brain weighed 40½ oz. It was at once noticed that the left cerebral hemisphere was rather shrunk, and that a small quantity of slightly yellow fluid was present inside the dura mater, in the so-called arachnoid cavity. The soft membranes over the left hemisphere were cedematous. Attention was directed to the motor convolutions on either side, and it was particularly observed that the ascending frontal and parietal convolutions on the left side appeared to be unduly narrow as compared with those on the other, but this did not exist to a very marked degree.

^{*} See p. 310 of this Journal.

On opening the lateral ventricles, it was at once seen that the floor of the left ventricle in the region of the corpus striatum was much shrunk, the ventricle being correspondingly enlarged. A slightly turbid yellow fluid was present in the ventricle. On more particular examination, it appeared that the corpus striatum was so destroyed as to be unrecognizable in its individual parts, being represented by an orange coloured structure, in the midst of which there was an apoplectic cyst the size of a small hazel nut. The shrunken corpus striatum was somewhat tough, and on section it was found impossible to make out any of the grey nuclei or the internal capsule. The anterior part of the left optic thalamus was also shrunk, the entire length of the left being 11 and of the right 15 inches, but the breadth the same on both sides.

The crura cerebri were not observed in the fresh state, but it was noted that the pons Varolii was much less in transverse diameter on the left side than on the right. The same applied

to the medulla oblongata, but to a less degree.

On dividing the cord transversely at various levels, it was seen that, in addition to the natural grey cornua, there was a grey area in the white substance at every level. This grey area was on the right side (the side opposite the cerebral lesion) and occupied the posterior parts of the lateral column. The areas of grey degeneration presented a very marked appearance in the midst of the white substance with which they were surrounded, and they appeared to be distinctly circumscribed.

The various parts of the nervous system were subjected to very careful microscopic examination, and the results stated here, and partially depicted in the accompanying plates, are

based on the examination of a large number of sections.

In order to aid in the comprehension of what follows, we shall here introduce a brief description of the methods adopted, and of the appearances presented by the nervous system when subjected to these methods of examination. The portions of the nervous system were cut into small pieces, and, after being placed in absolute alcohol for twenty-four hours, were then placed for a prolonged period in dilute solutions of chromic acid (1 in 600 to 1 in 400). Fine sections were now made, and they were examined in one of two ways, similar sections being always mounted by both methods, so as to serve for comparison. The simplest method was to place the section in glycerine or acetate of potash solution, as in the ordinary examination of tissues. The other was that which owes its origin to Lockhart Clarke, but has been variously modified. The sections were

first tinted with carmine or cosin. They were then steeped in alcohol long enough to remove all water. Then they were rendered transparent by the action of oil of cloves, and, when transparency was accomplished, they were mounted in Canada balsam dissolved in chloroform, or in a solution of gum dammar. The appearances presented by sections of the spinal cord prepared after Lockhart Clarke's method are very beautiful. The carmine is greedily taken up by the grey substance, which thus assumes a brilliant red colour, in which the large ganglion cells are particularly prominent. With the white substance it is very different; here it is only the axis cylinders of the nerve fibres and the sparse connective tissue which take on the colour, the medullary sheath of the nerve fibres, which forms the bulk of the white substance and gives it its dead white colour, being unaffected by the carmine. Hence in these sections the normal white substance contrasts with the normal grey substance in its freedom from colour, and in the appearance of the cut ends of the axis cylinders as red dots surrounded by the transparent medullary sheaths, and slightly tinted primitive sheaths and connective tissue (see fig. 11, right half). Any lesion which destroys the nerve fibres, especially as it involves the medullary sheath, will produce a striking change in these appearances. If in addition to destruction of the medullary sheaths there is a production of connective tissue. the change will be all the greater, as this tissue takes on the colour readily, and thus a deeply coloured area will be substituted for the normal poorly coloured white substance.

The other method of examination gives very different appearances, which are more like those presented in the fresh state. The medullary sheath being a fatty substance refracts light strongly, and when examined in glycerine, or especially in acctate of potash solution, it is markedly opaque. Hence the white substance is very opaque in these preparations, as compared with the grey substance. A lesion causing destruction of the nerve fibres with their medullary sheaths will render the white substance transparent, making it approach to the

grey substance in this respect.

The dead white appearance, to the naked eye, of the fresh white substance is due, as we have already mentioned, to the medullary sheaths, and when these are gone the tissue loses this appearance and becomes grey. From this is derived the name often given to this condition—namely, grey degeneration. The appearance is already referred to in our description of the post-mortem examination. We shall use the expressions sclerosis and grey degeneration as equivalent. In the illustrations

to this paper the drawings are taken from sections mounted in Canada balsam, as above described. The tinted portions are indicated by the shading, and by this means the exact distribution of the sclerosis will be readily followed.

In the more particular description of the changes in the nervous system we shall begin at the seat of lesion in the corpus striatum, and trace the changes downwards.

In the corpus striatum nothing could be distinctly made out except compound granular corpuscles and the debris of nervous structures. There were, doubtless, fibres remaining, but no

particular relations were distinguishable.

The crura cerebri presented a very marked contrast on the two sides, as seen in figures 1 and 2. It is to be remembered that in each crus, the locus niger, a grey nucleus with deeply pigmented ganglion cells (see especially figure 2), separates two masses of white substance. The more superficial or anterior mass of white substance is called the crusta, and it consists of coarse nerve fibres arranged in bundles or fasciculi (the fasciculi are partially indicated by radiating lines in figure 2). The deeper white substance lying beneath the locus niger is called the tegmentum, and it is more mixed with grey substance. It is clearly shown in figure 1 that a serious destruction of nerve fibres has taken place in the crusta, especially at its inner part. The white substance is replaced by connective tissue, and there has been great shrinking of the tissue, so that the locus niger is carried forward, and is itself somewhat shrunk. It may be said that of the entire fibres forming the crusta of the left crus cerebri not more than a half or a third remain. That the lost fibres were motor in function cannot be doubted.

In the pons Varolii the two lateral masses of fibres, proceeding from the right and left cerebral hemispheres, are united together, and the united mass is covered over on its anterior or lower surface by transverse or commissural fibres, which give the well known transverse striation to the surface of the pons. Immediately beneath these overlying transverse bands are the fibres directly continuous with those forming the crusta of the peduncle. In figure 3, only this part of the pons is figured in any detail. It will be seen that on the right side there are at least three large masses of nerve fibres. On the left side the corresponding region is greatly shrunk and deeply tinted, the whole left side of the pons in its anterior parts being much narrower than the right. The fasciculi of white fibres are divided by bands of grey substance in which ganglion cells exist. In preparations mounted in acetate of potash these

bands were very distinct on the right side. But on the left side the shrunken areas were even more transparent than the grey substance, and it was sometimes difficult to make out the latter. This would indicate that here the destruction of

medullary sheaths was very great.

Medulla oblongata.—When this is reached the superficial transverse fibres fall away, and we have again the continuation of the crusta coming to the surface and forming the anterior pyramid. Figure 4 represents a section of the medulla oblongata high up. It will be seen that the left anterior pyramid is not only degenerated (as shown by the shading which represents the red colour in the preparations), but greatly shrunk. The degeneration extends to the fibres lying between the olivary body and the middle line, so that the olivary body, by the shrinking of these fibres, is carried distinctly towards the raphe, the distance from which is considerably less on the left side than on the right. Farther down in the medulla oblongata, as in figure 5, it is still seen how the anterior pyramid is affected. The shrinking here is, perhaps, less considerable, but, if the more lightly shaded grey substance be observed in its relation to the pyramids, it will be

seen that there is some shrinking.

And now we come to the decussation, as illustrated in figures 6 and 13. It would have been possible to give figures showing the conditions at different levels, and demonstrating the gradual diminution of the degenerated area in the left anterior pyramid, and its transposition across the middle line to the right side of the central canal. Figure 6 shows a considerably diminished anterior pyramid, and it also shows decussating degenerated fibres, interrupted by normal white fibres crossing in the opposite direction. This interlacement of the bundles was often visible, and the appearances sometimes suggested the intertwining of the strands of a basket. In figure 13 (drawn under a higher power) this is partially shown, and it is also indicated how the degenerated fibres still retain indications of their direction. A careful examination of these two figures will show that in this region there is still considerable shrinking. The distance from the middle line to the border of the normal grey matter is much less on the left side than on the right. In figure 13 the middle line is indicated by the central canal, and by the transverse section of an artery at the surface. It will also be observed that, between the degenerated pyramid and the nearest grey matter, there is an area of unaffected white substance. It is quite clear from various sections, and is indicated in figure 6, that the degenerated fibres from the

anterior pyramid, after crossing the middle line, accumulate in

a mass to the right of the central canal.

In the spinal cord the degenerated fibres have their seat in the right lateral column. In figures 7 and 8, which are sections of the cervical portion of the cord, it is seen that the degenerated area is of considerable extent, and occupies about a third to a half of the lateral column, being situated in its posterior and middle parts. It comes close to the posterior cornu, but is nowhere continuous with it, nor has it induced any apparent change in this cornu. In the dorsal cord (figure 9) the area occupied is considerably smaller, but is still in the posterior part of the lateral column. In the lumbar cord the area is less, and more superficial. The degeneration is also much less intense, there being many nerve fibres preserved in the midst of the affected area. It is to be observed that in the spinal cord there is none of that shrinking of the degenerated areas which was so prominent higher up; the space occupied by the lost fibres has been filled up by new-formed tissue. Most careful investigation failed to detect any lesion in the anterior columns of the spinal cord.

It will not be necessary to insist very strongly on the significance of the facts adduced. It is universally admitted that the nerve fibres, which proceed from the motor convolutions, and which convey the impulses of the will, are concentrated in the neighbourhood of the corpus striatum, or more specifically in the mass of white fibres, technically called the internal capsule. In other words, the corona radiata, formed of the white fibres which spring from the convolutions, gathers itself together at the base of the cerebrum, and forms the internal capsule. The anterior two-thirds of the internal capsule, corresponding with the corpus striatum, is composed of motor fibres, the posterior third, corresponding with the optic thalamus, is formed of sensory fibres. In the present case there was a serious lesion involving the corpus striatum and corresponding portion of the internal capsule, and so there was an interruption to the conduction from the motor region of the brain to the periphery. This was evidenced during life by the hemiplegia, which, though not complete, was nearly universal, affecting arm, leg, and face.

This interruption to the motor fibres was followed by certain secondary changes. At the post-morten examination it was observed that certain of the motor convolutions were narrower on the side of the lesion than on the other side, but in microscopic sections no distinct difference in structure was detected.

On the other hand, the nerve fibres beneath the lesion had undergone very marked changes, the minute characters of which will be described farther on. We are surely warranted in asserting that the course of this lesion is the course of the motor fibres in the various parts of the nervous system concerned. We have traced these fibres from the corpus striatum into the crusta of the crus cerebri, the anterior bundles of longitudinal fibres in the pons, and the anterior pyramid of the medulla oblongata. We then followed them through the decussation of the pyramid to the opposite side of the medulla oblongata, where they lodged at the side of the central canal. On reaching the cord they passed to the lateral column, occupying chiefly its posterior part, and diminishing in number on descending.

This diminution in the motor fibres as successively lower parts of the cord are reached, is not difficult of explanation. It is to be presumed that the impulses of the will are conveyed, in the first instance, to the grey substance of the cord, and that the fibres which convey these impulses will pass into the grey substance in successive stages, as the various

centres for the arms, legs, &c., are reached.

We have reserved till now the description of the minute characters of the lesion concerned. It has been already mentioned that in the spinal cord the nerve fibres have been greatly destroyed, and that, as there is no shrinking, their place has been taken by new-formed tissue. This new-formed tissue is connective tissue, and as it has become the custom to designate conditions in which there is a chronic new formation of connective tissue by the name sclerosis, this term has been applied in the present case, especially by Charcot. Figure 11 shows a section under a moderately low power of a portion of the spinal cord, including partly the lesion and partly the normal white substance. From this figure it will be seen that the principal change is a destruction of the medullated nerve fibres. A few still survive in the midst of the connective tissue, but they are isolated. It is also seen that there is some trace of a fibrous arrangement in the area of the lesion. Figure 12 is intended to illustrate an appearance which we very rarely met with in our sections, and the rarity of which is a point of some consequence. In the centre of the figure the transverse section of a blood-vessel is shown in the wall of which there are a few round cells. The existence of round cells is to be regarded as evidence of irritation, and were they present in any abundance in the connective tissue the lesion might be regarded as inflammatory. It is not so, however, in our case; the round cells or nuclei are very scarce, very markedly so as compared with the appearances in a case of posterior sclerosis which we have been recently examining. The existence of shrinking in the higher parts indicates that there was much less new formation of connective tissue in these parts, the change having more the characters of a simple degeneration.

In the present paper all that has been attempted is to bring forward a carefully observed case of descending sclerosis, without any claim to novelty. The entire credit of elucidating the subject belongs to Türck,* whose papers we have only been able to consult in abstract in Canstatt's Jahreshericht. In the second of these papers, which contains the results from 29 cases of lesion of the brain and 12 of the spinal cord, the subject is so thoroughly worked out that very little was left for subsequent observers. From this paper it is to be gathered that in certain cases of lesion of the motor tract the whole lateral white column of the cord is degenerated on the side opposite the lesion, but that this extent is rarely reached, there being great variation in this respect. The secondary degeneration is not always confined to the lateral column of the spinal cord, it is sometimes present in the anterior column, and when this is the case it is on the same side as the lesion in the brain—these fibres do not decussate. In the anterior column it is usually a narrow zone bordering the anterior median fissure which is affected, but in some cases it may be the whole anterior column. Türck seems to assert that this variation in the distribution of the degeneration is related to the exact seat of the primary lesion. When the lesion only affects the internal capsule and the third section of the nucleus lenticularis it is the opposite lateral column of the cord which is degenerated. But if the lesion attacks the second and first parts of the lenticular nucleus as well, then the anterior column on the same side as the lesion suffers also.

It may here be remarked that in our case there seemed to be no trace of the nucleus lenticularis remaining, yet there was no affection of the anterior columns, so that Türck's explanation is scarcely applicable. A more probable explanation, as it seems to us, of this variation in the distribution of the secondary degeneration is that referred to in Ferrier's work

^{* &}quot;Ueber secundäre Erkrankung einzelner Rückenmarksstränge, und ihre Fortsetzungen zum Gehirn. Sitzungsbericht der Kais. Akad. der Wissensch. Mathem. Naturw. Classe, Bd. vi, 1851, p. 288-312; and Bd. xi, 1853, p. 93.

on the Localisation of Cerebral Disease (p. 11), as deducible from a work by Flechsig, Die Leitungsbahnen im Gehirn und Rückenmark, 1876. It appears from this work that the anterior pyramids of the medulla oblongata and their continuation upwards are developed at a later period than the strands in the spinal cord. Their development coincides with that of the hemispheres. These pyramidal strands are subject to very considerable variations in respect to their decussation in the medulla oblongata. As a rule the most of the fibres forming the pyramid decussate and pass to the opposite lateral column; very often some do not cross but are directly continued into the anterior column of the same side. Occasionally most of the fibres of the pyramids pass into the anterior column, and one case was seen by Flechsig in which there was no decussation at all. So that there appear to be variations in the amount of the decussation of the motor fibres in the medulla oblongata. Such an explanation as that given would apply to all the cases of secondary degeneration, and would explain its existence in the anterior columns in some cases and its absence in others. It would also explain those rare cases in which hemiplegia occurs on the same side as the lesion in the brain, there being in such cases no decussation: for this purpose it is used by Ferrier. We observe that Erb, writing in Ziemmsen's Handbuch, refers very specially to Flechsig's work, and concludes from it that the anterior column is affected along with the posterior part of the lateral column in about two-thirds of the cases.

A very lucid account of the subject of descending sclerosis is given by Charcot in one series of his Lectures.* In this work it is remarkable that there does not appear to be any reference to the existence of degeneration in the anterior column, although Charcot, with Vulpian, must have examined a large number of cases. A contribution of some value is made to the subject in the statement that secondary sclerosis, exactly of the same nature as that which has been engaging our attention, may result from lesions higher up than the internal capsule. Lesions which involve the corona radiata, or even the surface of the brain, if they penetrate deep enough, may produce descending sclerosis, even though the basal ganglia are quite intact. These lesions must involve the motor region of the hemisphere in order to this result, and they will mostly occur as a consequence of embolism of a large

^{*} Leçons sur les Localisations dans les Maladies du Cerveau. Par J. M. Charcot. Paris, 1876.

branch of the Sylvian artery. In a paper * by one of us, in which there was loss of brain substance from an injury to the head, it was inferred from the symptoms that secondary

degeneration of the cord had occurred.

The subject of descending sclerosis in lesions of the cortex of the brain is taken up very fully in a paper by Pitres, founded on five cases. † He comes to the conclusion that destructive lesions of the cortex of the cerebral hemispheres, even if very extensive, do not determine any secondary degeneration of the cord when they are seated outside the motor zone of the cortex, while destructive lesions, even of small extent, do give origin to secondary degenerations of the cord when they have their seat in the motor zone of the cortex.

Charcot, in his lectures, further insists strongly on the inflammatory or irritative character of the lesion in the lateral columns of the cord. He believes that it is of essentially the same nature as the spontaneous sclerosis which occurs, say, in locomotor ataxia, and that the increase of connective tissue is virtually the consequence of chronic inflammation. In our case we have not been able to confirm this view of Charcot. the lesion in the higher parts being more of a degeneration.

Before leaving this part of the subject we may refer to a series of experiments on animals, in which the results obtained, as to the course of the motor fibres in the spinal cord, entirely coincide with those deduced from the course of secondary sclerosis. Woroschiloff, tworking under Ludwig, divided the spinal cord in rabbits, using such a method as to ensure the limitation of the section to any desired portion. It is concluded that the communication between the brain and the spinal cord is effected by fibres, which run in the lateral columns of the cord. It is worthy of remark that this applies to both sensory and motor fibres. The results of pathological anatomy confirm this as to the motor fibres, and this itself affords a presumption that it is correct in regard to the sensory.

We have still to discuss the relation of secondary sclerosis to certain symptoms which are commonly met with in hemiplegias of old standing. Charcot asserts very strongly that the late rigidity which is so prominent in many cases, and which

^{* &}quot;A Case of Hemiplegia from an injury involving loss of Brain Substance in the Motor Region of the Convolutions." By Joseph Coats, M.D., Journal of Anatomy and Physiology, vol. xiii, 1879, p. 104.

[†] Gazette Medicale de Paris, No. 3, 20th January, 1877.

Woroschiloff. "Der Verlauf der motorischen und sensiblen Bahnen durch das Lendenmark des Kaninchens." Ludwig's Arbeiten for 1874.

was so manifest in the hand and arm in our case, is related to the secondary sclerosis, and most writers on the subject are inclined to the same opinion. It is greatly in favour of this view that certain spontaneous diseases, which are in all probability due to a primary sclerosis of the lateral columns, present similar contractions as one of their most prominent features. There is the amyotrophic lateral sclerosis of Charcot, in which, on the basis of post-morten examination, he asserts the existence of primary disease of the lateral columns; and there is the spastic paralysis of Erb, in which, although no post-mortem confirmation has yet been made, there is the strongest probability of primary lateral sclerosis. In both of these, spasm and rigidity of the muscles are very marked, and, just as in hemiplegia, it often goes on to permanent contracture. In the form described by Charcot, there is muscular atrophy superadded, apparently from the passage of the disease to the grey matter of the cord. The existence of these affections, in which there is a primary disease of the lateral columns, and the coincidence of the most prominent symptoms with those seen in late hemiplegia, goes far to prove that the symptoms are related to the disease of the lateral columns. It is to be added that the rigidity here referred to is the "late rigidity" of Dr. Todd, and that, like the sclerosis, it shows itself a considerable time after the occurrence of the hemiplegia.

It is more difficult to find a satisfactory explanation of the occurrence of the late rigidity. Dr. Todd ascribed it to the retraction of the cicatrix in the brain causing irritation and leading to spasmodic contraction of the muscles. But it is just the most paralysed muscles which are most affected—those, namely, which are most cut off from the cicatrix in the brain. No one now seriously holds by Dr. Todd's view. Charcot believes that the sclerosis is a chronic inflammatory lesion, and that the irritation of the spinal cord causes the spasmodic contraction. This is not at all a satisfactory explanation. presupposes a much greater degree of irritation than there is any evidence of. In our case we have already mentioned that there was the very slightest evidence of irritation. Moreover, it is difficult to understand how an irritation among degenerated nerve fibres should cause spasm of muscles. The remarkable uniformity in the form of the rigidity also suggests that some other explanation is necessary. In the case of the hand, for example, although flexors and extensors be equally paralysed,

the rigidity is nearly always in the flexors.

We find a much more probable explanation suggested by

Hitzig.* Along with Hitzig's suggestion we would take the very lucid exposition of the deformities which occur in infantile paralysis, given by Volkmann in one of the series of clinical lectures published by the Sydenham Society. It is to be observed at the outset that the position which the hand assumes in long standing hemiplegia is very much like that in infantile paralysis, the fingers are firmly drawn together in the palm of the hand. Now, it is to be remembered that in a hemiplegic. although the muscles are cut off from all direct connection with the impulses of the will, they are still related to centres in the anterior cornua of the grey matter of the cord. These centres in the cord will be stimulated in various indirect ways; by reflex irritations, by impulses of the will which find their way hither by indirect paths, and so on. These various stimulations will cause minor contractions of the muscles in the paralysed part. In this connection it is to be remembered that, as Volkmann points out, a muscle can contract actively, but cannot actively relax; in order to relaxation it must be pulled upon, through the agency of opponent muscles, or otherwise. Let us now suppose the condition of a patient with a paralysed arm The arm is nearly always kept lying across the chest while in bed, and supported in a similar position while going about. The fingers also, as Volkmann has shown, naturally assume a semi-flexed position, this is the position they naturally fall into from the conformation of the ligaments and bones independently of the muscles, and it is the position they assume after death. In the hemiplegic the fingers naturally assume this position. And now in the course of the day there are innumerable feeble contractions of the paralysed muscles, not enough to move the limb, but enough to shorten the muscles where there is room for it. That is to say, those muscles will contract which may do so from the position of the arm and fingers, and those will not, which, from the position of the arm and fingers, are kept on the stretch; their feeble contractions will be of no avail. And so, as time goes on, the muscles which may contract get into a habit of it, and contract rigidly. This view is supported by a fact adduced by Hitzig, and fully confirmed by Nothnagel. In the earlier periods the rigidity may disappear for a time if the patient lie for a considerable time quiet, especially in sleep. It sometimes happens that in the morning the arm, which has been quite stiff the night before, is found soft and mobile, but by degrees the stiffness returns as

^{*} See Nothnagel's article in Ziemssen's Handbuck, Vol. xi, Part 1. Second edition, p. 113.

successive muscular efforts are made.* These muscular efforts induce a slight stimulation of the centres in the anterior cornua of the cord, and corresponding slight contractions, which lead

up to a permanent spasm.

There is another symptom which is present in most cases of hemiplegia, and which has been prominently brought forward by Erb and Westphal; we refer to exaggerated tendon reflex. It is not known whether this existed in our case or not, as special attention was not directed to it. The explanation of this symptom is not so difficult. The muscular centres in the cord being cut off from the restraining influence of the will reply more readily to stimulation, and it is perhaps natural to suppose that the centripetal nerves of the muscles and tendons will stand in closer relation to the muscular centres than the ordinary sensory nerves.

EXPLANATION OF PLATES.

PLATE III.

Figures 1 and 2. The left and right crura cerebri. The right is normal, and the figure shows the locus niger, the crusta with lines indicating the fasciculated arrangement of the nerve fibres, and the tegmentum. In the left crus there is great destruction of the fibres of the crusta, about a half or two-thirds being destroyed and the locus niger carried towards the surface.

Figure 3. Pons Varolii. On the left side, the degenerated and

shrunken area is shown.

PLATE IV.

Figures 4, 5. Medulla oblongata at different levels. There is degeneration and shrinking of the left anterior pyramid.

Figure 6. Decussation of the degenerated fibres, and their passage

to the right side of the central canal.

Figures 7, 8. Cervical cord. Degeneration of the right lateral column in its posterior part.

Figures 9, 10. Dorsal and lumbar cord.

(Figures 1 to 10 are magnified about 31 diameters).

PLATE V.

Figure 11. From a section of the cord, showing a portion of the normal and degenerated structures. To the right the normal appearance of the white substance is shown. To the left a new-formed tissue takes the place of the nerve fibres, a few of which still survive in the midst of it. Magnified 80 diameters.

Figure 12. Section of degenerated part under a high power. The transverse section of a blood-vessel is seen with round cells in its

wall, this appearance being in the present case a very unusual one. A few nerve fibres with the deeply coloured axis-cylinders are seen, some of them large and some small as if shrunken. Magnified 460 diameters.

Figure 13. Decussation of the degenerated fibres in the medulla oblongata. The fibres from the left side are partially interrupted by those from the right side. The distance from the middle line to the nearest normal grey substance is seen to be much less on the left than the right side, indicating that there has been great shrinking of the pyramid.

NOTES ON A CASE OF OBSTRUCTION OF THE BOWELS WITH PERITONITIS.

By Mr. T. F. GILMOUR, L.R.C.P.E., L.F.P.S.G.

(Read before the Glasgow Southern Medical Society, on 23rd January, 1879.)

On the evening of 12th November last, J. C. called upon me, complaining of sudden pain in the bowels, with tenderness and constipation. I had attended him some two months before for peritonitis, and he was, in addition, only gradually recovering from primary syphilis, having had large ragged sores, and urethral fistulæ when I first saw him. He was about 27 years

of age, and unmarried.

The pain was severe, paroxysmal, localized in the right iliac fossa over the caput cocum coli, and radiated thence to the umbilicus. On the morning of the 13th he was considerably worse, there was increased tenderness, and meteorism; by night the tenderness had extended all over the abdomen, and the tympanitis was very great. On the morning of 14th vomiting was superadded to the symptoms, followed in a few hours by hiccup. When I mention that the patient was a railway signalman, working long hours, eating carried food, quite a stranger in his lodgings, a victim to syphilis, and with the history of antecedent peritoneal mischief which I have alluded to, it will, I think, be readily granted that there were here present all the elements of a very awkward case.

The treatment adopted was, ice given freely, iced milk, iced brandy and soda water, and locally, six leeches over the seat of pain; turpentine epithems with large soft poultices over them, and grain morphia suppositories to relieve pain. An injection of soap and water, with turpentine, was given early in the case, but, as it brought nothing away, and increased the pain and distress, it was not repeated. The patient also took a mixture containing laudanum and tincture of belladonna, from which he had seemed to derive considerable benefit in his previous attack. Under this treatment he got rapidly worse, sinking all through the 15th, and on the morning of the 16th he was apparently moribund. The countenance was pinched and ghastly; the pulse uncountable, and almost imperceptible at the wrist; the skin bedewed with cold clammy sweat; the voice gone, and every sign present of extreme prostration. At this juncture, Dr. Dunlop, who was seeing a patient of mine in consultation, kindly agreed to visit J. C., who was in the neighbourhood. The case, however, looked so hopeless that he declined to do anything or suggest anything, not merely on the ground that the amount and degree of peritonitis rendered surgical interference useless, but that the exhaustion

pointed to a speedy and inevitable death.

One remedy, however, had not yet been tried in a form from the use of which medical practitioners have again and again reported striking successes. I had not given belladonna in extract but in tincture, and that probably in inefficient doses. Indeed, I was relying far more upon the morphia suppositories and laudanum than upon the other drugs employed in the case. But I was not unaware of the good effects claimed by others for large doses of extract of belladonna; and on learning that Dr. Dunlop considered the time had passed for attempting to explore the abdomen, I suggested that we might still try this agent, and obtained his immediate consent. Six pills, each containing one grain of extract of belladonna, were therefore ordered—two to be given at once, and one every hour thereafter till my return. In the evening the patient's pulse was rather better, and his appearance less frightfully hippocratic, but still the case looked extremely critical. All the pills had been taken. One dozen were now ordered, to be continued as before, every hour. On the morning of the 17th, patient was decidedly better. The pupils of his eves were widely dilated, and there had been constant but easily controlled delirium during the night. There was no complaint of pain, and less flinching on palpation, the patient not seeming to be quite conscious. Another dozen of the pills were given, one to be administered every hour. The continuance of this heroic dose was ventured upon partly because I thought he was not getting the full benefit of all the pills, probably losing one now and then by vomiting, and partly because it was evident, from the pills remaining at the hour of visit, that they were not faithfully given every hour as prescribed, owing to change of nurse, to the other calls upon the time and

attention of his landlady, and to the disturbing accidents which, in one shape or another, always crop up in the sick room. In the evening there was a further and greater improvement. The volume of the pulse had largely increased; the patient was rational and comparatively free from pain; he only complained of not being able to see; the ring of the irides was scarcely discernible round the enormously distended pupils; he had no vomiting unless when he attempted to swallow milk or other fluid in quantity. Another injection was now given, but with the same ill success as the first. the heart was acting well, port wine was substituted for the brandy, and beef tea and chicken soup given in spoonfuls. On the morning of the 18th, the sixth day of the attendance, when I called, my patient was sitting up in bed at stool. I was told "he had done something," which was shown me in the bed pan. It was less than a table-spoonful of a blackish-green thick fluid, with no fæcal odour, and I had to be assured that it really came from the bowels. He was then engaged, however, in passing something more, of the nature of which there could be no doubt. The vomiting had ceased. He had taken in all 30 grains of the extract of belladonna in less than 40 hours.

Recovery was somewhat tardy, but on 2nd December he had improved sufficiently to be removed with safety to Bridge of Allan, to spend the winter with his brother, who occupies a

position of trust on the railway in that health-resort.

Two questions arise in considering this case. Had the patient obstruction of the bowels? And was the cure effected by belladonna? The diagnosis of obstruction was founded upon the sudden and violent character of the pain, and the defined local seat of swelling and tenderness at the beginning of the attack. Moreover, the patient's habits and the nature of his food were such as might be expected to tax the bowels severely. That it was caused by bands, diverticula, or adhesions binding down a loop of intestine, I consider most likely, both because the attack of peritonitis from which he had already suffered would no doubt leave the surfaces of the peritoneum in a state favourable to the formation of such abnormal growths or membranes, and because this is by far the most frequent kind of obstruction in adult life, constituting, according to Dr. Brinton, 311 per cent of all the cases. Intussusceptions form a larger per centage, but, then, they occur chiefly in infancy and childhood. The antecedent attack of peritonitis helps also to explain the rapid progress of the case and its extreme gravity. Aitken says - "If the stricture be not relieved, the case proves fatal about the fifth or sixth day." Our patient

was at his worst on the fourth day.

Did the extract of belladonna effect the cure? This question is more easily asked than answered. In my own mind, having watched the case closely all through, I have no doubt that it did, and that it was the only drug which had the slightest influence upon the symptoms. But we have many instances of cures in such cases under the opium treatment alone (and J. C. took no inconsiderable quantity of opium, in the shape of laudanum and morphia); under the clyster treatment, with water or air—a practice as old as the great father of medicine; under purgative treatment; under no treatment whatever, by spontaneous cure; and under surgical treatment, where a large wound and the shock of a major operation have been added to the original mischief. Trousseau advocates this procedure, and even goes out of his way to describe the operation. He says that "When there is imminent danger to life, there is only left the grave, the extreme resource of gastrotomy." patient was considered too far gone to bear this operation. From the frequent success and no less frequent failure of each of these lines of treatment, we must conclude that there are great differences of detail among cases grouped together as examples of even the same form and kind of obstructiondifferences as to area, intensity, integrity of tissue, constitutional reaction, susceptibility to drugs, vital powers, &c., which render the histories of such cases not easily comparable one with another.

But I submit that, under any circumstances, belladonna should rank as a powerful and valuable agent in the treatment of intestinal obstructions. It is anodyne and sedative; does not cause constipation, and does not diminish the secretions—in both of these important characteristics having the advantage over opium. The delirium which it excites is easily controlled, and should itself rank as a boon to the pain-racked sufferer, being of a pleasing, dreamy, and extravagant nature. Its power over habitual constipation is now fully admitted. It does not purge, but produces a more easy and more frequent discharge of healthy formed stools, and often succeeds where the strongest purgatives have failed. This may, in part at least, depend on the property which Brown Sequard found it to possess, of being a powerful excitant of unstriped muscular fibre. Stillé declares "that it possesses a real efficacy in discussing glands enlarged by chronic inflammation," and this may, to some extent, explain its beneficial action in hooping-cough. By relieving pain, it blunts the sensibility of the organs and

viscera, and thus prevents spasm or averts it, allays congestion, and promotes secretion. Dr. Harley considers that it should stand at the head of our stimulants—"There is no medicine," he says, "in the Materia Medica which at all approaches belladonna in its simple, direct, immediate, and powerful influence in exalting the force and rapidity of the heart's action."

The mode in which it produces these and other effects foreign to my present purpose is altogether unknown; but all its actions and virtues may perhaps be understood, if not explained, on this supposition—that it influences the pneumogastric nerves as it does the senses, as a deliriant, excitant, stimulant, anodyne, and sedative. We have but to look to the wide range of distribution of this pair of nerves to see the varied ways in which belladonna may be utilized by the physician.

CASE OF RECENT INVERSION OF THE UTERUS—REDUCTION.

BY WILLIAM ALEXANDER CASKIE, M.A., M.B., LARGS.

On 1st May, 1878, I was requested to visit Mrs. W., ætat 32, who had that morning been confined of her fifth child. On entering the apartment in which she lay, although she had previously been of a robust constitution, I was struck by her pallid and exhausted appearance. The pulse was 120 per minute, and hæmorrhagic in character. I learned that she had been in labour since the previous day, and that the birth had taken place about 3.30 a.m. Nothing unusual had occurred during the labour, but, two hours after the birth of the child, the midwife who had been in attendance forcibly extracted the placenta, repeated efforts having previously failed to detach it. The violence used in the operation had caused such a shock as almost to induce faintness, since which she had suffered pain of a bearing down character and had lost a considerable quantity of blood. The saturated condition of the bedclothes, bed, and mattress, and part of the floor on which the blood had fallen, bore evidence of the truth of the latter statement.

On examination, I found the upper part of the vaginal canal occupied by a semi-solid, apparently pendulous, body, the superior portion of which was beyond reach of the finger. The surface was irregular or flocculent, with the exception of the centre of the dependent part, which was smooth and felt somewhat similar to the distended membranes during a pain. Upon grasping the tumour (so called for want of a better term)

with the hand, blood was expressed with a gurgling sound, and it felt exactly like a saturated sponge with hardened interior. The state of the abdomen negatived the idea of the possibility of twins, consequently I was led to diagnose the case as one either of retention of part of the placenta or of inversion of the uterus, my experience of the latter extending only to one, and that a chronic case, in which amputation of the organ had ultimately to be performed in the hospital. I could not determine, by external manipulation, the absence of the uterus from the abdomen, nor, though about 8 ounces of urine were withdrawn, could I enter the catheter sufficiently far to afford, in conjunction with the finger in the rectum, any aid in the diagnosis. Ascertaining from the neighbour in attendance that the placenta had been thrown out, I desired her to fetch it, and, on examination, it was found to be entire, but, from the condition of its maternal surface, it seemed to have been adherent in several places. Another vaginal examination convinced me that the uterus was completely inverted, and that the irregularities on the surface of the tumour were little tufts of coagulated blood.

Having obtained the assistance of my father, who confirmed the diagnosis I had made, we resolved to attempt re-inversion without giving chloroform. Placing the patient on her left side the lower portion of the tumour was compressed until its bulk was diminished by the expression of the blood it contained. The continuity of its surface with the upper part of the vaginal wall could now be detected, but no ring or constriction could be felt. The woman was then turned on her back, and, placing the left hand on the abdomen to steady it, compression was again made with the right hand, the fingers being applied to the neck of the tumour. On pressing deeply with the left hand I could feel the finger tips of the right hand through the wall of the abdomen. Directing the patient to resume the former position, i. e., on her left side, I again grasped the tumour and combining pressure upwards in the direction of the umbilicus, with rotation of the organ upon its axis, the re-inversion was gradually effected, the cervical portion being first reduced. No sudden jerk was experienced or sound heard. The fingers were retained in the cervix, and the hand in the vagina, until, by external examination, the contraction of the uterus had been satisfactorily determined.

The patient, immediately on the completion of the operation, expressed her sense of relief. A compress and bandage were applied loosely, and a draught containing mxl of liquor ergotæ prescribed in a little brandy and water. The operation, which

probably occupied less than a quarter of an hour, was completed by 9.15 p.m., nearly 16 hours after the accident had occurred.

On visiting her next morning, she stated that she had passed a good night, the pain was alleviated, and the discharge not more than usual. In the evening she continued well, the pulse being 108; an opium pill was prescribed at bedtime, and spare diet was recommended for a few days. With the exception of a little febrile uneasiness, due to constipation, which was not relieved until the sixth day, the progress to convalescence was uninterrupted and satisfactory. A vaginal examination on the fourth day indicated that the uterus was still enlarged and low down, while the os was widely open. For a few days the abdomen over the area of the uterus was, perhaps, more tender to the touch than is usually experienced in normal cases after confinement. The patient sat up in bed on the eighth, and, to my agreeable surprise, she was sitting in a chair on the tenth day.

I have been led to publish this case by the rarity of such an occurrence as inversion of the uterus. From the statements I received from the patient and nurse, I had no doubt, independently of the condition of the placenta, that it was due to traction on the cord. Had the uterus been in a semi-paralysed state, or the process of involution interrupted, it is probable that death would have occurred immediately or soon after inversion from profuse hemorrhage. The tonic condition of the uterine walls doubtless retarded the escape of blood from the venous sinuses. The smooth part in the centre of the fundus of the tumour seemed to me to correspond to that part of the placenta where the cord subdivides and begins to ramify, and where no villi are developed.

The mode of re-inversion was undertaken on the impulse of the moment, the rationalé being, after the expression of the blood, to wear out the contraction of the os by sustained pressure, as is done in using the forceps. In pressing upwards in the axis of the umbilicus there is no probability of impinging on the sacral promontory. During the compression of the tumour, the patient did not exhibit any degree of acute suffering, showing what freedom can sometimes be taken with an organ in other instances highly sensitive and subject to

inflammatory affections.

After reduction of an inverted uterus, text books recommend the hand of the operator to be retained in the cavity until the uterine walls contract, but in this case the cervix contracted so firmly on the fingers that the hand could not be introduced after the fundus and body had passed through.

CURRENT TOPICS.

THE MEDICAL ACT, 1858, AMENDMENT BILLS.

THE Lord President, following the lines laid down by Lord Ripon, seeks to amend the mode of entrance to the profession, while Dr. Lush wishes to alter the constitution of the General Medical Council. Both measures are urged on the ground of a general demand for them, but we cannot discover the evidence of such demand. The profession does not care for, has never shown much knowledge of nor interest in questions of education; a certain section is only concerned in the reconstruction of the Council, as a phase of the general question of representation. We have every year heard members of the General Council make statements, with as much regularity as Mr. Newdegate or Mr. Whalley, about the low standard of examination somewhere, statements which the reports of the Council visitors contradict, and of which some journals have at last become ashamed. Of direct definite complaint we have heard nothing, till a large number of teachers of anatomy and physiology memorialized the council of the Royal College of Surgeons on 25th February, asserting that the primary examination at the college is uncertain and unsatisfactory, one journal adding that the memorialists "hardly show how much reform is needed." But whatever be the pressure on him, whether that public demand in which we have no belief, or, as he himself hints, the desire to ascertain if medical legislation is his mission, the Duke of Richmond seeks to secure that every man registered as qualified to practise shall be qualified both in medicine and surgery, including therein midwifery, and thus to abolish the anomaly of incomplete qualifications or licences granted in respect of knowledge of one of these departments only. He further wishes to secure uniformity of these qualifications, but this can only be done by making the qualification a minimum one. This is, as every one now knows, the reduction of the test to the standard of the weakest examination in the country, not as is the duty of the State, if it interferes at all, the steady elevation of the standard.

But the uniformity of this minimum qualification throughout the kingdom, that uniformity sighed after by doctrinaires in medicine and statecraft, is to be brought about by the creation of three Boards, one for each division of the kingdom; the examination rules for each division being drawn up by the authorities of that division, and subject to the approval, not. as last year, the revision of the General Medical Council. There is, therefore, small chance of uniformity in curriculum of study, in fees, or in standard of examination between the different parts of the kingdom. The Government recognized this so far back as July last, when Lord C. Hamilton proposed the amendment now embodied in clause 5, in which, as well as in clause 18, it is made clear that it would be undesirable to force the corporations to attach candidates to themselves simply because they apply. The working of clause 5 is as follows:-A man passes the examination of the Medical Board, say for Scotland, he is now "licentiate of medical authorities," and applies to one of the three Scottish corporations, say the College of Surgeons, Edinburgh, to be attached That body may refuse, or neglect for a month to attach the applicant under any designation; he then goes back to the Registrar of the General Medical Council and is registered as a qualified practitioner under the symbols L.M.S.M.

(licentiate in medicine, surgery, midwifery).

The universities are not bound to attach candidates within a given time, and the schedule to the Bill shows this. But it also shows that the licentiate of the medical authorities in one part of the kingdom must seek attachment to the corporations only of that part of the kingdom in which he got his licence, a return to the old guildry system from which we have long been free. As L.M.S.M. of the Scottish Board, a man might practise in England, but he could not hold appointments for which membership of the College of Surgeons or licentiateship of the Apothecaries Company is an indispensable pre-requisite. There is thus a curious kind of protection established, and so long as certain diplomas are privileged there would be an absence of free trade quite at variance with the the spirit of the Medical Act, 1858. Nor can it be said that the power of refusing to attach a candidate is only a device for allowing women licentiates access to the register. Lord C. Hamilton, in his amendment, describes the refusal "either without any ground being assigned, or on the ground of sex, or any ground except noncompliance with a scheme under this Act, or on some ground which would justify the erasure" of the name from the register. The clause was intended and will act so as to encourage the notion that the Board examination, a minimum one, is amply sufficient, and so will discourage the attempt to win the higher honours of the corporations, still more of the universities. Last year it was compulsory on the corporations to grant a title, not necessarily that of licentiate or member, but associate, or some other which should not under the charter confer a share in the management or interest in its funds. This year there is no compulsion, but the corporations (whose examinations cover less ground than those of the universities) are actually shown by the Bill to grant superior titles to the L.M.S.M.; yet the Bill was said to be demanded by the people

because present examinations are not strict enough.

The first amendment to be insisted on is that there shall be no isolation of the three parts of the kingdom, and as this cannot be done without re-modelling the plan for the conjoint Board, there is chance for a rational proposal being adopted. Meanwhile, a single portal, with three passages, for England, Scotland, and Ireland respectively, of unequal width, and of unlike cost, but each walled off from the other, is a legislative bull from which ten years of agitation and "the general demand of the country" should have saved the Government. We have pointed out the protection which clause 5 would introduce into our educational system, England being in this case the favoured country. The effect would be to prevent students coming to Scotland as freely as they have hitherto done, and so to diminish the number of graduates. The public would suffer in several ways. First, students would lose the advantage of studying in more places than one, and so escaping the risk of undue slavery to the opinions of one set of teachers. The Medical Act, and the Scottish Universities Act were framed to permit this circulation, a student having it in his power to study for two years at a university, say Glasgow, or for one year at Glasgow, and one year at some other university, the other two years being spent at some recognized medical school. It is of this liberal regulation that Dr. O'Leary got a hazy notion when he said only two years of study were needed in Scotland. Next, the number of men who receive the wider culture which a full university curriculum secures would be diminished, and the profession, which is rapidly ceasing to be learned, would soon sink into a trade. Third, the teaching would cease to be of the same high class as it now is. Both last year and this, testimony has been borne by English journals to the elaboration of our Scottish methods of instruction, but justice has not been done to the fact that teaching is a profession in Scotland, that men look forward to becoming teachers, and to their practice as an aid in teaching, whereas in London men take up teaching as a shoehorn to practice, and cast away the aid as soon as possible. The Scottish schools, by reason of their share in the granting of licences to practice, are under control and supervision, and

it would be anomalous indeed, if a Government which seeks at present to bring private secondary schools under its control, should do anything to drive medical students into private medical schools, which are under no supervision. The Duke of Richmond quite misunderstood the position of Scotland last year, and thought that was a mere question of money which was, in reality, only illustrated by the money stake. The diminution of the Scottish university medical schools means the impairment of Scottish education generally. The departments of a university are so united that if one, which long experience and much outlay has raised to as high a pitch of perfection as possible, is crippled, all the rest suffer, and through them the schools of the country will feel the injury. The scientific chairs, those on whose completeness and efficiency the science degrees of the country depend, owe, in Scotland, their efficiency to the funds which large numbers of students provide for them. Thus, the money may be said to be an index of the injury, but the Scottish universities would scarcely regard the money without the students as equivalent to even a less sum with a large body of students. Whatever conflict of interest there may be between the universities and corporations, however the latter may seek to restrict the former in examinations. there is only one common patriotic interest in the maintenance of the integrity of our Scottish university system. It must be remembered that the universities have already sought to protect the public interest by the adoption of non-professional men of eminence into their Examining Boards. With the help of these gentlemen the examinations are conducted so as to guard against the uncertainty and unsatisfactoriness with which London medical journals say the examinations of the London College of Surgeons have been justly charged.

We have shown that the public, in whose interest reform is proposed, will suffer by the changes this Bill seeks to initiate. How will the student stand? He will have to pay, according to the English conjoint scheme (which, if the Bill passes, will become the rule for England), thirty guineas in two or more payments, a moiety going to defray the cost of the examinations, the remaining moiety being distributed among the corporations, so that the College of Surgeons shall get from students, for its support, the money which Parliament has steadily refused. But why should there be a surplus? The scheme says that university men may be admitted only to the final examination and pay five guineas; but must pay twenty-five guineas more for the licence or membership of the corporation. Thus, five guineas for each of three examinations is the proper charge,

the fifteen guineas, balance in the one case, twenty-five in the other, being taken from them for the support of non-teaching bodies, whose sole nominal function is that of discipline, a function as obsolete as the similar one of kirk-sessions. Thus, in the name of the public, which cares nothing about it, the student is mulcted 100 per cent in excess of what is necessary, and thus pays for the protection of the public as well as for the museums, or it may be even the luxuries of private bodies in whose affairs he cannot acquire a voice without the expenditure of still larger sums. Have the students not a claim for representation on the General Medical Council!

There are other points to be noted in this Bill. The General Medical Council may even (clause 27) delegate its powers in framing schemes to one person, a delegation dangerous in any case, but especially where, as in Ireland, it is scarcely possible to find a man sufficiently dispassionate to be trusted by all sides. The Council is already managed too much by this kind of delegation, but Dr. Lush's Bill may provide, or, at least, be

the means of providing a check on this system.

Again, the scheme for the regulation of midwives is optional, whereas the public have good cause to ask for such compulsory regulation as shall protect it from that greatest curse of women, ignorant midwives. But we still deprecate the transfer of the functions of a branch medical council to bodies so august as even the justices of a county, or, in Scotland, the Commissioners of Supply or a Burgh Council. Uniformity is here of no consequence in the Duke of Richmond's eyes, one would think, and yet the midwives registered in one area may afterwards get their names transferred to another local register for the area to which they may wish to migrate; they may pass under one set of rules and practice alongside of those who have passed under another set of rules, which may either be better or worse. This section is now dropped, but we notice it because it illustrates the want of uniformity of principle noticeable in the Bill.

The demand for uniformity, then, is not realized, nor capable of being realized, by this Bill save in so far as the qualification to be granted will be uniformly low. The function of the State to see that education does not sink is surely set at nought by this Bill, which assumes that some examinations are defective, and yet must start with one which is not a bit higher. The General Council of Glasgow University, last autumn, struck the true note when it passed a resolution in favour of a State Board, whose examination should follow, not precede, those of the various licensing bodies. Such an

examination would pitch its standard by that of the highest, not the lowest group of candidates. Every inducement would be held out to the student to do the best work he could, and take the best and widest curriculum he could find. The public would be rewarded by the possession of a medical staff more uniformly well trained than it now has, and general education would benefit by the higher cultivation of a profession whose influence is as powerful as it is widely diffused. And if by such a proposal London would seem to gain nothing, let it take the advice of some of its own teachers, and consolidate its competing schools into one, the cost of which, to the student. will be as much less as its teaching efficiency will be greater than at present. But this is a private question. The business of the State is simply to register trade marks, as Dr. Cameron put it, not to invent, as this Bill does, a new trade mark, indicating less value than those which custom has created; not to pass off the invention as an improvement, whereas it has only made a bid so low that, even in this educational Dutch auction, it cannot be decently underbid.

As the reconstruction of the Council is to be reported on by a Select Committee, it is unnecessary for us to say more than to express the hope that if the representatives of the Corporation and the Crown are not to be held as trustworthy representatives of the profession, no re-arrangement may be decided on which will neutralise the influence of those who have hitherto done so much for education, or will add to the cost of

our already too costly Medical Parliament.

The Habitual Drunkard's Bill, promoted by Dr. Cameron, M.P. for Glasgow, has passed the third reading in the House of Commons, and Lord Shaftesbury has undertaken the charge of it in the House of Lords. There is thus every likelihood that the Bill will soon become law, and the profession and the public are alike to be congratulated on the prospect. It will at length be possible to render some effectual help to the wretched victims of habitual intemperance, at least to those who really wish to be helped.

This beneficent measure has greatly suffered from the opposition of three classes,—those who would not interfere with the liberty of the subject even when his welfare and that of others demand it, those who deem habitual drunkenness merely a vice requiring no special legislation, and, lastly, those who utterly distrust all private asylums, and include in the condemnation

the "retreats" authorized by the Bill.

In the face of such opposition many modifications have been necessary, and the Bill has escaped shipwreck only by its promoters wisely consenting to throw overboard much that was valuable, such as the creation of inebriate asylums at the public expense, and the compulsory confinement of the habitual drunkard, by an order of the sheriff, at the instance of his relatives.

The measure is now merely permissive, and allows the habitual drunkard to confine himself in a retreat for a period not exceeding twelve months. Even this privilege is not granted without the most elaborate precautions against its abuse. The request must be made in writing, must be accompanied by the statutory declaration of two persons that the applicant is truly a habitual drunkard, and must be countersigned by two justices of the peace, who, before signing it, are required to certify that they had satisfied themselves that the applicant was a habitual drunkard, and that he perfectly understood the effect of his application.

The phrase "habitual drunkard" is defined by the Bill to mean "a person who, by reason of habitual intemperate drinking of intoxicating liquor, is dangerous to himself or herself, or to others, or incapable of managing himself or herself, and

his or her affairs."

Provision is made for the licensing and the inspection of the retreats, for the liberation on probation of the patients, for re-taking them should they escape, and for their immediate discharge from the retreat by a sheriff or judge on due cause shown.

Even when deprived of its compulsory clauses the measure cannot but prove a great boon. It is true that it does not reach the worst cases, but it will reach and help all whose restoration is likely. We have little faith in the compulsory reformation of habitual drunkards, though we would gladly

confine them for the sake of their friends.

At present we cannot give even hopeful cases a fair chance of recovery. Temptations meet them on all hands, which they are quite unable to resist, even while deploring their weakness, and the retreats contemplated by the Bill seem to promise exactly what is required. Lunatic asylums are not at all suitable for cases of this kind, nor are such patients proper immates of asylums. We learn that no fewer than eighty-five of the public asylum superintendents of this country have, at the invitation of Dr. Yellowlees, of the Glasgow Royal Asylum, Gartnavel, petitioned the House of Commons in favour of Dr. Cameron's Bill.

The measure is avowedly a tentative one, and the retreats, excepting those conducted by philanthropic or charitable associations, are to exist for only five years. We earnestly hope that their value may be unquestionably demonstrated during this period, that public opinion may be further educated on the subject, and that this Bill, which Dr. Cameron has so successfully conducted, may prove but the precursor of stronger and yet more beneficent legislation.

SEABURY AND JOHNSON'S INDIA-RUBBER PLASTERS.—We have received, from Messrs. Seabury & Johnson, a parcel of samples of their india-rubber plasters, and feel able, conscientiously, to recommend them to the notice of practitioners. We have had opportunities of practically testing the qualities of, at least, four of the varieties, with the result that they were found on all occasions equal, and in some aspects preferable, to the preparations generally met with. The employment of india-rubber as the basis of their composition renders them exceedingly light, flexible, and adhesive, and therefore less likely to slip from the part to which they are applied.

Dr. J. G. Wilson writes:—"Do bank notes ever convey infection? For some time past I have entertained the opinion that bank notes, particularly one pound notes, may possibly be an unsuspected means of propagating infectious diseases. This appears to me a matter of no little importance, and well worthy the attention of the profession, especially when we take into account the large circulation of these notes, and the filthy and discoloured condition in which many of them are so often found."

We understand that Dr. Cassells has undertaken the translation into English of Professor Politzer's "Lehrbuch der Ohrenheilkunde," at the request of its distinguished author, and in fulfilment of a promise made by Dr. C. to Professor Politzer more than five years ago.

The translation is well on, and shortly after the appearance of the second volume (about June next) it will be completed

and sent to press.

REVIEWS.

The Localisation of Cerebral Disease; being the Gulstonian Lectures of the Royal College of Physicians for 1878. By DAVID FERRIER, M.D., F.R.S. London: Smith, Elder & Co. 1878.

THE work before us is a fitting sequel to Ferrier's well known book on *The Functions of the Brain*. That dealt chiefly with the physiology of the cerebral convolutions; this has to do with what we may call the topographical pathology of the same structures.

It will be remembered that, in the former work, the attempt was made, on the basis of experiment, to map out the surface of the brain into specific centres, having perfectly definite and distinct functions. The experiments were made on various lower animals, but the summit was reached by those on monkeys. The brain of the monkey so closely resembles, in its general plan of formation, that of man, that the author, at the end of his work, carried his conclusions by analogy to the human brain, and mapped it out in a similar way to that of the monkey—into certain specific centres. There were no conclusions except those from analogy drawn as to the functions of the human brain.

In the present work the experiments by disease are taken as illustrating the localisation of function in the human brain, and the results of observation are used to test the analogies deduced from the experiments on the brain of the monkey. It is to be observed that it was mostly after the experiments of Fritsch and Hitzig, and those of Ferrier, had directed special attention to the subject, that observers began to pay special attention to the exact position of lesions of the convolutions. So long as nothing was known as to the special functions of convolutions it was hardly worth while mastering their intricate topography. And thus it happens that the bulk of the observations on this subject is of very recent date. Taking this into account, it must be regarded as astonishing that such a mass of evidence has already been collected. It is specially to the French school of nervous pathologists, led by Charcot, that we owe the facts already ascertained—but English observers have not been far behind.

Taking the cerebral hemispheres as a whole, it may be stated that the functions of the anterior and posterior parts are very obscure, and this conclusion is derived both from experiment and pathological observation. These parts have nothing directly to do with motion or sensation. The intermediate portion, according to the results of experiment, contains the centres of motion and sensation, and pathology completely confirms this conclusion as regards motion, while as to sensation a great deal remains to be made out.

Taking, in the first place, the frontal lobes of the hemispheres. it has long been known that considerable portions of them may be removed without causing loss of function to any serious extent. The experiments in monkeys showed that while the powers of voluntary motion and sensation were retained, there was, according to Dr. Ferrier's impression, a loss of the faculty of attentive and intelligent observation. Among the cases of injury to the frontal lobes in man, the most interesting and striking is the celebrated American crowbar case, which is given here with some detail. There can be no doubt as to the facts, and the skull is preserved in the museum of Harvard University. A young man was tamping a blasting charge in a rock with a pointed iron bar 3 feet 7 inches in length, 14 inches in diameter, and weighing 131 lbs. The charge suddenly exploded, and the iron bar, propelled with its pointed end foremost, passed clear through the man's head, and was picked up at some distance covered with blood and brains. It had passed through the frontal lobes, which it must have seriously disorganised. The man recovered, and lived for twelve and a half years, without showing a trace of motor paralysis. It has been unwarrantably assumed that there was no change in the condition of this man after the accident. Quotations given here from the records of the case show that there was very marked deterioration of the intellect. contractors, who regarded him as the most efficient and capable foreman in their employ previous to the injury, considered the change in his mind so marked that they could not give him his place again." "A child in his intellectual capacity and manifestations, he has the animal passions of a strong man. Previous to his injury, though untrained in the schools, he possessed a well balanced mind, and was looked upon by those who knew him as a shrewd, smart business man—very energetic and persistent in executing all his plans of operation. In this regard his mind was radically changed—so decidedly, that his friends and acquaintances said he was 'no longer Gage.'"

This observation and others show that, while the frontal lobes have nothing to do with sensation or motion, they are probably closely related to the intellectual operations, and more particularly those in which attention is specially concerned.

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It may be added that it is obviously very difficult to estimate the mental powers of a patient. "A man may not be incapacitated for the ordinary duties of life, but that his mental powers are altogether unscathed, even by an unilateral lesion, I venture

to question."

So much attention has been paid to the "motor regions" of the brain since the experiments of Fritsch and Hitzig and Ferrier, that already a great body of evidence exists as to the localisation of motor function in the human brain. evidence is collected here, and forms the most important and largest portion of the work. We do not propose to go particularly into this subject, but the following words of our author seem to us to be completely justified by the evidence adduced. He says that the "cases of cortical disease which I proceed to quote clearly establish the fact that lesions in that part of the human brain, which corresponds to the area termed motor in the brain of the monkey, produce paralysis of voluntary motion on the opposite side of the body; a hemiplegia, like that resulting from destructive lesion of the corpus striatum, or more particularly of the anterior part of the internal capsule (hémiplégie centrale vulgaire). This paralysis is frequently associated with rigidity, or convulsive spasms in the paralysed parts, particularly in the early stage; and if destruction of the cortical substance be complete, the paralysis is of permanent duration, and sooner or later is followed by late rigidity and secondary sclerosis of the motor tracts."

It is not only shown that extensive lesions of the motor region produce hemiplegias of the ordinary type, but there is now sufficient evidence that this region is, in man, as in the lower animals, divided into separate centres, representing the movements of the various parts of the body. Thus, we have lesions interfering with the centre for movements of the leg, situated in the postero-parietal or superior parietal lobule, and the result is a monoplegia of the opposite leg; and so forth. It is not to be understood that all this is thoroughly worked out; but the facts collected here go far to confirm the localisations which, on the basis of analogy, were affirmed for the human brain. It should be added that what applies to the convolutions applies equally to the white substance immediately beneath them; that is to say, a lesion which interrupts the white fibres coming from a centre or centres in the convolutions, will have precisely the same effect as one which destroys these centres.

It has already been observed that the paralysis resulting from extensive lesions of the motor region of the cortex is very like that of the ordinary hemiplegia from lesion of the corpus striatum, and it is like it too in its permanence. But there is this difference, that it takes a very extensive lesion of the cortex to produce the ordinary hemiplegia. "More frequently, paralysis of cortical origin is fractional or dissociated, or is a succession of dissociated paralyses or monoplegiæ. In cortical affections we frequently find a hemiplegia, at first complete, resolving itself into a monoplegia; or a monoplegia becoming a hemiplegia by progressive advance of the disease to other motor centres. This latter is a significant indication of cortical disease." The explanation of this, of course, is, that in the cortex we have centres occupying limited areas of a pretty large field, whereas in the corpus striatum we have the entire fibres from this field contracted into a comparatively small band of white substance in the internal capsule. Another aid to the diagnosis of cortical paralysis, as distinguished from central, is the frequent occurrence of spasm and early muscular rigidity in the former.

There is much in the section on irritative lesions of the motor area which we should be glad to refer to, such as the part on Jacksonian epilepsy, but we must hasten on to direct attention to the part devoted to "Lesions of the Sensory Regions." This portion of the work deserves very particular attention from those who have in view the advance of cerebral pathology, because the field here has been much less worked out. It is, indeed, a much more difficult field to work, because affections of sensation are much more difficult to determine in their minor degrees than those of motion. Our author animadverts rather strongly on the perfunctory manner in which the condition of the special senses has been examined in

recorded cases.

In the first place it is regarded as well established that the sensory fibres, coming from the body, run in the posterior strands of the crus cerebri, and are continued upwards in the posterior third of the internal capsule, corresponding with the thalamus opticus. Lesions of this portion of the internal capsule produce hemianæsthesia of the opposite half of the body, and the interference with sensation affects all forms of sensibility, sight and smell being concerned as well as the others. In lesions of the sensory tracts in the cord or in the mesencephalon, the special senses, and all the cerebral nerves, may escape, and if they are affected there is often the phenomenon of alternate anæsthesia, and, perhaps, alternate motor paralysis.

It may, therefore, be regarded, as fairly well established, No. 4. Yol. XI. 290 Reviews.

that a lesion of the posterior portions of the internal capsule causes affection of sensation in the opposite side, just as a lesion of the anterior portion of the capsule causes affection of motion on the opposite side. But it has not yet been so clearly shown that the various forms of sensation are distributed in definite areas of the convolutions, as the various movements undoubtedly are. It is clear that sensation is not localised in the frontal and occipital lobes, because these may be abolished by disease or injury without any interference with sensation. If sensation is localised at all, we must look for it in the middle parts of the brain not occupied by motor centres. It is known that Ferrier in his former work endeavoured, by experiments on monkeys, to localise the sensory centres. For one of these he considers that he was successful—namely, for sight. He found that electrical irritation of the angular gyrus, which curves round the upper extremity of the fissure of Sylvius, produced movements of the eveballs, pupils, and head, which seemed to be the effect of subjective visual impressions. Destruction of the angular gyrus produced temporary blindness of the opposite eye, and destruction of the gyrus on both sides caused permanent blindness of both eyes. When we turn to human cases, there are very few which confirm this localisation of the sense of sight, and there are some which seem inconsistent with it. We are content to say that, looking to the insufficiency of observation, even by highly skilled physicians, where the special senses are concerned, we are inclined, with the author, not to lay very great stress on the absence of evidence, or even the apparently contradictory facts relating to this point. Attention having been called to it, we may expect that, through time, facts of more exactitude will be accumulated. Even more do these statements apply to the sense of hearing, which the author, by his experiments on monkeys, localised in the superior temporo-sphenoidal convolution. Our author points out that, in accordance with the results of experimental physiology, it is to be expected that "unilateral destruction of the centres of hearing and sight need not cause actual insensibility to optical or auditory stimuli of a complete or enduring character; there are certain facts which tend to show that unilateral lesions of these centres may produce what we may call subjective deafness and blindness, or abolition of visual or auditory perception and discrimination. Such conditions are not unfrequently classed with aphasia, and may occur with it; but they may occur without true aphasia or speechlessness. They have been termed by Kussmaul 'word-blindness' and 'word-deafness'

(cceitas et surditas verbalis). These two conditions may occur separately or in association. In the one case, though a man may be able to speak and write, he cannot translate written symbols into ideas, though he may understand articulate sounds; in the other, he may be able to read, though he cannot understand spoken words, or he may be unable to do either. In neither case is there actual insensibility of the eye or ear."

In regard to smell and taste, there is as yet next to no evidence as to their localisation in the cerebral convolutions in man, although our author's experiments led him to localise smell in the lower extremity of the temporo-sphenoidal lobe or subicular region, and of taste in the neighbouring regions. Tactile sensation was localised in the hippocampal region, but even the experiments here were inconclusive, and there are no undoubted facts as yet obtained from human pathology.

It will be seen that, so far at least as the sensory centres are concerned, the inquiry is only at its commencement. We believe that there is strong reason to expect that the careful observation of cases, which will be greatly stimulated by the publication of this work, will soon add much to the elucidation

of this department of pathology.

We have two adverse remarks to make on the work before us. It seems to have been carelessly gone over for the press, and even in some parts written in rather a hasty manner. At p. 102, for instance, "convolution" appears instead of "convulsion." At p. 30 there is the exceedingly inelegant phrase "you will, I think, have no doubt in convincing yourselves." We had marked several other blunders, but these will suffice. The other objection we have is that the book has no index. In a work like this, which is full of new and interesting facts, it is really too bad that there is no alphabetical index appended, and we can conceive of no reasonable excuse for the omission, which renders the book so much more cumbersome for purposes of reference.

Clinical Lectures on Diseases Peculiar to Women. By Lombe Atthill, M.D., Master of the Rotunda Hospital, Dublin; Consulting Obstetric Surgeon to the Adelaide Hospital; ex-President of the Dublin Obstetrical Society, &c., &c. Pp. 324. Fifth Edition. Dublin: Fannin & Co., 1878.

A BOOK is worthy of commendation in proportion as it fulfils the end its author professes to have in view. Dr. Atthill offers these Lectures to practitioners and students, not as constituting "a complete treatise on gynæcology," but as containing such information as shall guide them safely in ordinary practice till they have mastered the contents of larger works, such as those of Grailly Hewitt, Barnes, Gaillard Thomas, and West. In this view it is quite worthy of praise. The author notes the fact, unfortunately too patent, that many practitioners prescribe for uterine affections, with very hazy notions as to the exact nature of the disease which they are treating.

In illustration of the course and treatment of various diseases, cases are given, and, for the most part, remarkably well given, the details mentioned being sharply to the point. The author has—what is a great merit in the eyes of a young practitioner or student—his own mind made up about the nature of the maladies of which he speaks, and gives clear and even minute instructions as to their treatment by medicines,

and more particularly by local applications.

In speaking of Sir James Simpson's galvanic stem pessary, the author argues that it does not possess any galvanic properties which, as such, act on the uterus, but that the good effects often seen are due to the fact that "when the two metals (copper and zinc) of which the instrument is composed are in metallic contact, and surrounded by a fluid containing saline matter in solution, a certain amount of electrical action goes on, and that when the stem is introduced into the cervical canal, the salts contained in the uterine secretions are decomposed, and corresponding salts and oxides of zinc and copper are formed, which act on the mucous membrane lining the uterus."

The two lectures on menorrhagia are particularly good, and the treatment is given in a clear and decided way. For the treatment of menorrhagia, resulting from endometritis, Dr. Atthill strongly advises the local use of fuming nitric acid as being both safe and efficient. In order to prevent injury to the cervix, as well as to avoid dilution of the acid by the cervical mucus, he has devised a platinum cannula and stilette, of which Gaillard Thomas, in his latest edition, speaks approvingly.

There are some sentences which are so worded as to be a little obscure, such as that at the top of p. 316, where it is difficult to make out which instrument is indicated by the

word "former."

To illustrate the text there are thirty-five fair woodcuts.

That the book fills up a gap seems to be proved by the fact that it has gone to a fifth edition in the course of a few years, and we would be disposed to commend it to the notice of those who are not already well versed in the diseases peculiar to females. On Asthma: its Pathology and Treatment. By J. B. BERKART, M.D. London: J. & A. Churchill, 1878.

THE key-note to this book is found in the assertion that asthma, hitherto attributed to deranged innervation, is in reality due to pathological changes in the lung; is, in fact, not a disease but a symptom occurring during the progress of structural changes in the pulmonary tissue. Many forms of asthma have long been recognized as having such an origin, and to these have been appended the term "symptomatic," indicative of their dependence on diseased conditions of some of the thoracic organs. But, apart from such cases, almost all authors describe a form of paroxymal dyspnæa, which is apparently independent of any structural lesion, and in which physical diagnosis, and sometimes even post-morten examination, fail to reveal any adequate cause for the grave symptoms observed. Finding no structural basis for the disease, recourse has been had to the idea of a functional disorder of the bronchial muscles depending upon deranged nervous action, and "nervous" or "spasmodic" asthma has been described as a It is to combat this notion that Dr. Berkart has issued his book. He has bestowed much time and patient inquiry on the subject, and we sympathize with him in his crusade, knowing that functional diseases are very vague and indefinite, comprising a heterogeneous collection of cases, which agree only in the fact that the essence of the disease has eluded our grasp, and the mind, baffled in its inquiry, falls back on that "ignotum quid"—functional disorder. see how far Dr. Berkart substantiates his statements.

The prevalent notion is that nervous asthma is due to some deranged condition of the respiratory nerves, which results in spasm of the bronchial muscles, and the facts which lend a great colour of truth to this idea are the suddenness of onset of the intense and agonizing dyspnæa, its sudden subsidence with apparently complete restoration to health, and the ready induction of these paroxysms by emotional disturbances. All these facts, so sudden and startling in their manifestation, appear to point to some subtle nervous derangement, rather than coarse organic lesion. This, however, Dr. Berkart does not allow, holding that every case of so called nervous asthma has a distinct structural lesion as its basis, and denying in toto the spasmodic contraction of the muscular fibres as playing any part in the disease, on the ground that not only is spasmodic stricture inconsistent with the clinical characters of the affection, but actually impossible. It has been 294 Reviews.

well proved experimentally that electric stimuli do produce contraction of the air tubes in a lung which has been removed from the body, but when such a lung is inflated it is said that no result is obtained, the distension proving an impediment to the contraction of the bronchi; and hence, reasons Berkart, since this obstacle exists normally in the living subject there can consequently be no bronchial stricture. The experiments on which this assertion is founded do not appear to have been sufficiently extended and minute, and there are ample evidences, even in this book, that the majority of experimenters have obtained such contraction of the bronchi as to warrant them in the conclusion that the bronchial muscles have that effect. Their function, according to our author, consists merely in opposing the traction to which the air tubes are subject. Other structures might have answered this purpose quite as well, and in an economy where means are so marvellously adapted to ends, it is surely very reasonable to suppose that circular muscular fibres surrounding a hollow tube have something to do with the regulation of its calibre. And here analogy may be quite fairly used in the argument. Spasm of the intestinal muscular fibre leads to irregular contraction of the gut, with the symptoms of colic, and may it not happen that the bronchial muscles become the seat of a like spasmodic affection; and what also lends a greater degree of probability to this notion is the fact that, as in colic, an evacuation often proclaims the subsidence of the irregular peristalsis, so in asthma, may not the appearance of expectoration, with which the attack usually terminates, have a similar import.

Another argument which he urges is as follows:—If the bronchial muscles are engaged in the respiratory process at all, they can only act as auxiliaries of expiration, and in such a view, increased activity on the theory of spasm, while it would impede the admission of air, would facilitate its expulsion, the opposite of what takes place in asthma where the inspiration is relatively more effective than the expiration. This, however, is easily explained by the fact that the inspiratory forces are stronger than the expiratory, and the violent muscular efforts to fill the chest will more easily overcome the obstacle than the less effective expiratory forces, which are mainly the atmospheric pressure and the resiliency of the

chest aided by the auxiliary muscles of expiration.

A fact on which Dr. Berkart lays great emphasis is "that in the vast majority of instances the bronchial muscles are so greatly impaired in nutrition as to be incapable even of contracting." This statement may be applicable, to some extent, to cases of long standing, when degenerative changes have taken place, but it does not touch the position that the early attacks of the disease often occur at a period of life when degenerative changes are little likely to have occurred, and in the midst of such seemingly complete health, and with such suddenness as to be apparently explained on no other ground than spasm. Emphysema and dilatation of the bronchi, with degenerative changes all through the pulmonary tissue are frequent sequels of long continued asthma, and under such conditions spasm of the bronchial muscles is less likely to be effective; but the circumstances are now so favourable in other ways for dyspneal attacks that it is not difficult to imagine that a much less effective constriction of the bronchial tubes may give rise to paroxysms as violent as those induced in the earlier stage by strong spasmodic stricture alone.

On what, according to Dr. B., does asthma always depend? It depends on idiopathic forms of chronic bronchitis and emphysema, and the pathological changes primarily consist in an abundant infiltration of the bronchial walls with white blood corpuscles, which, in the course of their development or disintegration, are either converted into connective tissue or undergo fatty degeneration. The muscular fibres of the tubes are paralysed by the degenerative changes, and dilatation of them ensues. The so called nervous asthma accompanies the gradual and latent progress of these conditions. It is only a link in a chain of quasi-independent affections, which commence with inflammatory changes in the pulmonary tissue, and terminate with emphysema or bronchiectasis. The whole question of ætiology and pathogeny is discussed with the fullest detail and in the most admirable manner, and the clinical description of the asthmatic paroxysm is exceedingly graphic and striking. The treatment is detailed in the closing chapter. From his view of the disease there is, of course, no indication for allaying spasm, and his remedies, which are those commonly in use, act by diminishing blood tension, and modifying the secretory function of the bronchial mucous membrane; and by these means the hyperæmic or inflammatory conditions, which are the groundwork of the disorder, are got rid of.

This work is certainly a valuable addition to the literature of asthma, and although we have indicated our dissent to some of the views propounded, we are none the less ready to confess that the author has, in our opinion, produced one of the best books which has lately emanated from the medical press.

On Loss of Weight, Blood Spitting, and Lung Disease. By HORACE DOBELL, M.D. London: J. & A. Churchill, 1878.

Dr. Dobell aims at affording a statistical view of the relation of loss of weight and hamoptysis to pulmonary consumption, and he gives short notes and some tabular statements of 107 cases in which careful observations were made. His impression is that loss of weight is almost invariably the precursor of pulmonary consumption, and, as a rule, takes precedence also of hemoptysis. This is simply a confirmation of what has long been the current belief in this country. Part I of the book is taken up with notes of cases, and Part II consists almost entirely of extracts from authorities on the relation of hæmoptysis to consumption, Of course, the doctrine of "Phthisis ab Hæmoptoe" is discussed ad longam. Dr. Dobell rejects it, and is of opinion that if hæmorrhage is ever the origin of phthisis it is in consequence of the disintegration of the lung structure by the effused blood to an extent beyond the power of repair. All this is common enough doctrine. But when the author goes a step further and explains the mechanism of the hamorrhage, he carries us at once into the region of the wildest speculation. He accounts for the hæmorrhage by the "damage to the finest vessels of the pulmonary alveoli by oxidation of albuminoid tissue during the interchange of gases between the air in the alveoli, and the blood deprived of its normal amount of fat;" and he adds, "this disintegrated albuminoid tissue is nascent tubercle, and this process is tuberculisation." The author set this theory before the profession some years ago, but it has not commanded much assent.

The treatment is fully discussed, and, on the whole, very ably; but under this heading we come upon the following:—

R. Extract Ergot. Liq. 5ii (to contract the vessels). Tinct. Digitalis 3i (to steady the heart).
Acid Gallic 3i (to clot the blood).
Mag. Sulph. 3ii (to relieve the congestion).
Acid Sulph. Dil. 3i (to assist the rest).
Infus. Ros. 3viii (to make a mixture).

What would the shade of Latham say to this farrago? Dr. Dobell throws cold water rather on the hypodermic injection of ergotine, as he says he has not "gone cracked" over it; but we can assure him, from a pretty considerable experience, that it is both rapid and effective in its action, while the assimilative processes of the patient are not disturbed by such complex doses as the above mixture.

Part V. is devoted to the treatment of pulmonary consumption, the secret of which, in the author's opinion, lies in the abundant supply of fats to the blood, and especially fats acted upon by the pancreatic juice. This forms the text for an extended consideration of pancreatic emulsion, which Dr. Dobell brought into notice some years ago. As a matter of clinical experience we are glad to admit the great benefit derived from the preparation in certain tubercular affections in children, but we cannot endorse the author's exaggerated notions as to its curative effects.

REPORTS OF HOSPITAL AND PRIVATE PRACTICE.

WESTERN INFIRMARY.

Under the Supervision of Dr. W. G. DUN.

FROM DR. M'CALL ANDERSON'S WARDS.

ACUTE DESQUAMATIVE NEPHRITIS—TREATMENT BY MILK DIET AND SUBCUTANEOUS INJECTIONS OF PILOCARPINE—RECOVERY.— G. C., aged 20, was admitted 13th February, 1879. The case was one of acute desquamative nephritis, coming on suddenly on 4th February, with the usual symptoms—namely, anasarca, high coloured, scanty urine, and tenderness in the lumbar region. On the previous evening he had been indulging rather freely, and had exposed himself to cold. When admitted, there was some dropsy of the face and lower extremities, but none could be discovered in the trunk. The urine was highly albuminous,—specific gravity 1018,—and contained blood corpuscles, and a large number of tube casts. Speedy improvement took place after admission, the urine increased in quantity, and the dropsy soon disappeared. At this date, 10th March, the patient is quite convalescent, and the urine does not show a trace of albumen. The treatment adopted was of the simplest character, no medicines were given, the patient was kept in bed, and put upon milk diet. On 18th February, daily injections of a quarter grain of pilocarpine were commenced, and continued for some time. Marked lowering of

the blood pressure, profuse perspiration, and salivation, lasting about half an hour, were caused by this means, but as distinct improvement had begun to show itself before the injections of pilocarpine were commenced, Dr. Anderson would not like to say how far it contributed to the recovery of the patient.

ANEURISM OF ARCH OF AORTA—FAILURE OF IODIDE OF POTAS-SIUM, AND SUCCESS OF GALVANO-PUNCTURE.—This case was shown by Dr. Anderson at the meeting of the Pathological

Society on 11th March.

G. D., engineer, aged about 52, was re-admitted to the Infirmary on 5th March, 1879. He was first admitted on 16th April, 1877, on account of a large pulsating aortic aneurism, which, for eight months, had been causing him considerable pain. On inspecting the chest, decided fulness and visible pulsation were observed in the upper part of the precordial region, the centre of pulsation being in the third left intercostal space, and near to the sternum. A soft systolic murmur was audible on auscultation. The apex beat of the heart was felt in the sixth intercostal space, 2 inches to the left of the nipple; there was also some epigastric pulsation. Both pulses were equal. On 18th April, 1877, treatment by iodide of potassium was commenced, 20 grains being given three times a day, increased on 29th April to 30 grains; absolute rest was also enjoined, and diet was slightly restricted. This treatment was continued up to about the middle of August, when 10 min. tinct. veratrium viride were added. He improved somewhat till September, but on the 12th of this month it was observed that there was dimness of vision in the right eye; the right pupil was dilated and sluggish; and he spoke of a feeling of construction at the root of the tongue. On 20th of September he complained of pain shooting down the arms. Pulsation in the tumour had now become more marked. From this date the condition of the patient gradually continued getting worse. By the middle of October the swelling was very prominent and soft, almost fluctuant indeed, and the walls of the aneurism felt very thin. On 26th October the iodide of potassium and veratrium viride were stopped, and 15 min. tinct. digitalis every four hours substituted, but withdrawn on 10th November owing to sickness. These various remedies having, after a lengthened trial, proved ineffectual, Dr. Anderson, on 3rd December, performed galvanopuncture. Before the operation the tumour had a diameter of about 4 inches, and was, at its most prominent part, about 11 inches above the level of the surrounding surface. Pulsation was very marked. The apex beat of the heart was now 31 inches to the left of the nipple; the left pulse was weaker than the right, and air entered the left lung less freely than the right. The operation lasted one hour, the needle connected with the positive pole was inserted in the third left intercostal space, four cells were employed for the first half hour, and six for the second. On withdrawing the needle, dark blood oozed out, pressure of the finger was at once applied, but blood continued to escape into the surrounding tissues to an alarming extent, and great pain was complained of in the chest and back. The hæmorrhage was soon controlled by the application of cold and firm pressure with the finger, and during the day equable pressure was kept up by means of a sand bag. On 7th December the swelling due to the effused blood had greatly subsided, and the pain was entirely absent. On 8th December 15 min. tinct. veratrium viride were ordered. Steady improvement continued, and on 7th February, 1878, patient was dismissed, nine months after admission, and two months after the operation. The tumour was much smaller and firmer, and pulsation much less marked; pain was entirely gone. Since leaving the hospital he has done no work, but has taken regular exercise, sometimes walking as much as ten miles in a day. There has been, notwithstanding, steady and continuous improvement, and when re-admitted, although there is still some pulsation, and a soft systolic murmur, there is only the slightest degree of fulness over the seat of the aneurism. The general condition of the patient is quite satisfactory, he himself saying "that he would not know that anything was the matter with him."

FROM DR. LEISHMAN'S WARD.

PELVIC HÆMATOCELE WITH PHLEGMASIA DOLENS—TREATMENT BY REST—RECOVERY.—Mrs. R., aged 34, was admitted 24th December, 1878, complaining of great swelling of the left leg and thigh. The colour of the leg was natural; it was semi-elastic on pressure, and very painful all over, but especially so at certain parts. The swelling began six or seven weeks before admission, and in two nights reached an enormous size; it was accompanied by excessive pain. She had always been a pretty healthy woman. The affection complained of began in relation to her menstruation. During the previous month there were several slight hæmorrhages, and her menstrual period lasted twelve days instead of three as usual. After menstruation ceased, a pain remained in the left iliac region, which con-

tinued for about a fortnight, and at the end of this period the swelling of the leg began. On examination per vaginam, a large elastic tumour was detected, posterior to the vagina, and reaching down nearly to the perineum. The os and cervix uteri were high up in front. Examination per rectum showed that the tumour bulged very much in upon that viscus, and was much harder to the touch than from the vagina.

The leg was treated by fomentations at first, and later a bandage was applied. Nothing was done for the pelvic tumour, the rest in bed seemed to favour its absorption, for it gradually diminished in size, and when the patient left the hospital on 26th February it had quite disappeared, and the uterus had returned to its normal position. The left leg was still stiff,

but she was able to walk about tolerably well.

PELVIC HÆMATOCELE-TREATMENT-REST-GREAT IMPROVE-MENT.-Mrs. W., aged 39, was admitted 25th July, 1878, complaining of flooding, and of pain and swelling in the lower part of the abdomen. She had been always strong and healthy, had been married sixteen years, and had borne eight children. She had always menstruated regularly until seven months before her admission to hospital, when menstruation became so frequent as to occur every week, the quantity also was excessive, and for about three weeks before admission flooding had become constant. For some months she had suffered slight pain, but for the last three weeks it had become very harassing, and was very much like labour pains. On 19th July she was seen at the dispensary by Dr. Leishman, and at that time no tumour was observed. When admitted, however, six days later, a broad tumour of moderate hardness could be distinctly felt in the abdomen, reaching from side to side, and nearly as high as the umbilicus. On examination per vaginam, a large tumour, corresponding to that felt above the pubis, was found occupying the pouch of Douglas, and displacing the uterus to such an extent that the os, situated high up behind the symphysis, could only be reached with difficulty. treatment in this case was the same as in the foregoing onenamely, rest in bed. On 25th August, a month after her admission, the following note was made: - "Since admission this patient's improvement has been very marked. She is now free from pain, sleeps well, and has a good appetite. tumour is very much diminished in size, and the os uteri is much lower and farther back than on admission." The patient left on that day without leave, and did not return, the case, therefore, is somewhat imperfect, but sufficiently well illustrates the value of rest in such cases.

PELVIC TUMOUR, PROBABLY HÆMATOCELE, WITH GREAT EN-LARGEMENT OF THE UTERUS-NO VERY MARKED IMPROVEMENT. -E. R., aged 21, unmarried, was admitted 16th May, 1878. She looked a tolerably healthy and well nourished person. For a few years past she has suffered from pain and weakness of the back, and difficulty in micturating, so that on several occasions the catheter had to be passed. Menstruation had always been quite regular. On examination per vaginam, the os uteri was felt immediately behind the lower part of the symphysis pubis, being displaced by a large semi-elastic tumour which occupied the pouch of Douglas. The sound passed 5 inches in the normal axis of the uterus without causing much pain. An indistinct feeling of tumefaction above the pubis was noticed. In this case Dr. Leishman carried out the same plan of treatment as in the two preceding cases, but not with the same success. The patient remained in the hospital for two months, some diminution in the size of the tumour took place, but at the date of dismissal the tumour was still large. Some months later she presented herself for examination, but no material change had taken place.

COMPLETE PROCIDENTIA UTERI-OPERATIONS.—This was a case of complete procidentia uteri, of long standing, in a woman aged 51. All attempts at keeping up the uterus by means of pessaries proving useless, on 7th August, 1878, Dr. Leishman operated with the view of closing up the posterior two-thirds of the orifice of the vulva. From the edge of each labium a narrow strip of skin was dissected off, and a smaller strip of the mucous membrane of the vagina having been also removed, the opposite edges of the labia were brought together and fixed with wire sutures. After the removal of the sutures, patient had an attack of bronchitis, and the violence of the cough forcing down the uterus burst the parts asunder twelve days after the operation. On 18th October the operation was repeated, but this time metallic plates were used on each side. through which the wires were passed and fixed on the outside. By this means the parts were brought well into apposition. The superficial parts were secured by finer sutures. This second operation was successful, a considerable part of the posterior portion of the gap united very well, and contributed materially to the support of the uterus. Patient was instructed to use a pad, in order to obviate the danger of a rupture of the newly united tissues.

On the 11th February Dr. Leishman again operated in the

case of a woman of about 40 years of age in a similar condition to the preceding case. The operation was the same as that above described, metallic plates being used in the same manner. It has been wholly successful. On the 19th the deep sutures were removed, as the metallic plates were beginning to cause some ulceration. On the 21st the remaining sutures were all removed, and complete union was found to have taken place.

From Dr. George Buchanan's Wards.

CALCULUS IN BLADDER-HISTORY OF CASE-LITHOTOMY.-C. B., aged 32, was admitted 15th February, 1879. His appearance was that of a weak, worn out man, and his countenance had an anxious expression. He was very restless and uneasy, and could not sit for more than five or ten minutes at a time. During the whole day and night he was much pained in the perinaeum, and was continually getting out of bed to make water. When doing so he stood with his legs wide apart, and rocked his body from side to side, the urine coming only in small quantities at intervals. The history of the case is that two years ago he was suddenly seized with a severe pain in the right lumbar region, which continued for four months, and quite incapacitated him for work; at the end of this period, after a day of excessive agony, he experienced complete relief from the pain. Immediately after, he began to suffer from pain in the perinæum, and sometimes at the point of the penis, which often swelled very considerably. Frequently he had the feeling that there was something in the urethra to come away. At this time micturition became frequent and painful. For six weeks before admission to the infirmary the pain had been much more severe, and micturition more frequent, as often as four times an hour. He never noticed the presence of blood in his urine. The urine is very muddy, reaction alkaline. On standing, a very large deposit of pus and triple phosphates takes place.

On sounding, a stone was easily detected, it seemed to be very large and somewhat rough, the bladder apparently contracted upon it, so that the sound could not get round it.

On 22nd February Dr. Buchanan performed the operation of lateral lithotomy. Knowing that the stone was large, and expecting to have some difficulty in extracting it, he made a much larger wound than usual. Several attempts were made to withdraw the stone, in doing which it got broken, and not until several considerable pieces were removed was the main

mass of the stone extracted. The bladder was then well syringed out, and a tube passed into it, by the wound, for the

escape of the urine.

The stone measured approximately 2½ inches long, and fully 1½ wide, and was of a somewhat kidney shape. The most of the stone is very hard, and seems to be composed of uric acid; the greater part of the outer shell is in fragments, and appears to consist of phosphates, with a small quantity of uric acid. The whole stone weighs 1 oz. 3 drs. 20 grs. After the operation Dr. Buchanan said that the difficulty in extracting the stone was due not only to its size, but also to the tight manner in which the bladder contracted upon it. He did not consider the case a very favourable one for recovery. He expressed regret that the case had not been taken in hand effectually at an earlier period of its history, as with so clear an account of the formation of calculus in the kidney, and its subsequent passage down the ureter to the bladder, the stone might have been detected and removed by a lithotrite, and the performance of so severe an operation, as that which the patient had just gone through, rendered unnecessary.

Since the operation the case has progressed fairly well; he has had one or two slight attacks of diarrhoea. 14th March.—

Patient steadily progressing to recovery.

MALIGNANT ULCER OF THIGH—AMPUTATION IN UPPER THIRD OF THIGH.—H. B., aged 50, was first admitted some time ago; he was a tolerably healthy looking man. Thirty-six years ago he was burned by an explosion of gunpowder. The burn involved both thighs and the abdomen. The right thigh never healed up properly, and for the last seventeen years there has been an open ulcer. At the date of admission it was about 3 inches in diameter, circular in shape, although irregular in its edges, and had very much the appearance of being malignant. It was seated about the middle of the thigh, and chiefly on its outer aspect. But little improvement took place during patient's residence in hospital. Shortly before dismissal a small piece was cut from the edge of the ulcer, and was found to be carcinomatous. The patient was advised to have the leg amputated, but, as the ulcer gave him very little trouble, he would not consent. On 27th February, 1879, he returned, desirous to have his leg amputated. The ulcer was in much the same state as when he left, except that the nodules round the edges had become more prominent. On 1st March the leg was amputated above the junction of the upper and middle third of the thigh. No recognized operation could be performed, as Dr. Buchanan wished to amputate as low down as possible, and avail himself of the sound tissues on the inside of the thigh. A modification of the circular method was adopted, the incision being eliptical and extending farther down the inside of the thigh than the outer diseased side. By this means more of a flap was obtained, and the bone sawn through as far down the limb as possible. A deep suture was passed through the flaps and secured by lead buttons; the edges of the flaps were fixed in the usual manner. The case progressed quite satisfactorily, but at the dressing on the 8th the bone was found to be projecting beyond the flaps at the outer angle of the wound, and on the 10th about an inch and a half more of the bone was sawn off. The flaps had united to about one half of their extent. The condition of the patient continues satisfactory, and a good result is looked for.

HÆMORRHAGIC MENSTRUATING ULCER HEALING UNDER TREAT-MENT.-Mrs. M'G., aged 41, admitted 10th January, 1879. Patient is a healthy looking woman; she suffers from an ulcer of the right leg of about six years standing. It commenced as a boil, which broke, and a small ulcer formed, which has gone on increasing in size. On admission it measured about 8 inches by 6, and is situated on the outside and back of the lower half of the leg. On the front of the leg are also a few small ulcers. All are deep, dirty, and unhealthy looking. Patient was married about four months ago. She commenced to menstruate about the age of 16, menstruation was never very regular, and the quantity was always scanty. She used, about the time of her menstrual periods, to suffer very much from headache and pain in the back, and she was bled at the elbow four times for relief of the headache. Since the ulcer has formed she has had very great relief from these symptoms. During this period she has never menstruated properly, but discharges of blood from the ulcer have recurred with considerable regularity, and lasted for about a day or two; the quantity was not great. Shortly after her admission to the infirmary the ulcer bled, the bleeding continuing for about There has been no recurrence of it since forty-eight hours. then.

A blister was applied to the ulcer a few days after patient was admitted; this improved its condition greatly, and it has gone on since rapidly healing.

GLASGOW ROYAL INFIRMARY.

Under the Supervision of Dr. J. WALLACE ANDERSON.

FROM DR. WOOD SMITH'S WARDS.

CHRONIC DYSPEPSIA - GREAT DILATATION OF STOMACH-MECHANICAL EMPTYING OF STOMACH—CURE.—Two cases just dismissed from Ward VII illustrate very markedly the benefit of this practice in such disorders. The more striking of the two was that of Bernard C., set 43, who for fully six years had suffered greatly from acidity of the stomach and nausea. followed from time to time by vomiting, the fluid ejected being sour, containing sarcinæ, and undergoing fermentation. last symptom became by and bye more frequent, till for some time past he has every night vomited, as he supposes, all the food he has taken during the past twenty-four hours. On admission, the stomach was seen to be enormously dilated, and on percussion was found to reach from the ensiform cartilage down into the hypogastric region, measuring in that direction about eight inches, while transversely its measurement was proportionably greater—viz., about sixteen inches.

Every evening the stomach was observed to swell to this extent, accompanied by severe pain in the epigastrium and profuse perspiration over the head generally. Treatment. Sulphite of soda was first given, with occasional purgatives, chiefly rhubarb and magnesia. Tonic treatment was then adopted—iron and strychnia in a bitter infusion—all with little

benefit.

Under Dr. Wood Smith's direction the stomach was then emptied daily, or every other day, by Mr. Rowlands, house physician, in the following manner. A stomach pump tube, to which a more flexible piece of tubing had been attached, was passed into the stomach. This always caused retching sufficient to send some fluid through the tube, which, being held as a syphon, acted as such till the stomach was completely emptied. By now elevating the flexible tube it was easy to pass fluids into the stomach, and in this way it was always washed out with a solution of bicarbonate of soda, the alkaline fluid in turn being drawn off from the stomach as well. It was generally found necessary to give a little stimulant after this operation, and a mild aperient, usually some compound rhubarb powder, was generally given. Steady improvement followed this treatment, the intervals between the operations were

gradually extended, and some days before his dismissal the

symptoms had quite disappeared.

The other case was that of a man set. 25, who was suffering from much the same symptoms, but of shorter duration. A similar treatment was adopted with as satisfactory a result.

FROM DR. CAMERON'S WARDS.

GANGRENE OF THE TOES FROM FROST-BITE—SENILE GANGRENE, &c.—March 3rd, 1879. Dr. Cameron has at present in his wards three cases of gangrene of the toes, and this morning he made this the subject of a clinical lecture which we took

the opportunity of attending.

"Case I is that of M. R., et. 50, who suffers from gangrene of the extremities of the great toe and the next two. During the recent frost, while walking about Glasgow Green, his foot became very cold and numb, especially the toes of one foot. He went home and noticed his toes were white and benumbed, and on bringing them near the fire for a time, they became very painful and then inflamed. Finally, a black slough formed on the pulpy portion of the three toes referred to, and this has separated leaving the bone untouched. Now as to treatment. The inflammation no doubt has passed off, but should we interfere? Frost bite is not limited in its effects like an injury from a cart wheel. There is always an intervening part between the margin of the slough and the really sound tissue, the vitality of which must be lowered. Consequently, if you should amputate immediately above the seat of injury your flaps will be apt to slough. Therefore, you should always wait for a time, while some say you should leave the amputation to Nature herself. If you do operate however, you will understand it should be at a point higher up than you would otherwise select. Here evidently Nature is doing the work herself: all that is necessary is to apply such dressings as will limit the putrefaction of the sloughs.

"Case II is that of a man in Ward XX, who has lost all the toes of his left foot. He is above 60 years of age. Knows no cause; felt nothing; enjoyed good health, but was very much troubled with cold feet and also dull aching pains in feet and legs. He had what would be popularly called "rheumatic feet." The femoral artery was felt all down the thigh but not the posterior tibial. What is the cause of the gangrene in this case? It is a case of senile gangrene. It occurs in men of 60 and upwards—elderly men. It affects the toes and feet. It was distinctly described

first by Percival Pott, and this case answers very accurately his description. It never occurs along with regular gout, but rather with flying pains which are called "rheumatic" or "gouty." It is also more common in men than in women. Next Pott says that he has more often found it in the rich and voluptuous than in the labouring poor; more often in great eaters than in great drinkers. But here our case is not the same. Our patient is not a drinker, but says he takes a dram occasionally, which probably means that he gets drunk now and then. He belongs to the labouring poor, and therefore not likely to indulge largely in the pleasures of the table. At first he only felt the feet swollen-he was glad to get his boots off at night. Then they became inflamed, and as this was passing off the gangrene began in the toes: now they are all dead. Notice, there is no history of an injury such as paring a corn too This form of gangrene depends usually on atheroma of the blood-vessels whereby their calibre is encroached upon and their elasticity lessened.

"Treatment. He complains of great pain at night or during the changing of the dressing, but we are simply applying an oily dressing which is changed three times a day, and I believe we should do no more. Syme cut off stimulants from an old gentleman who was accustomed to live well and put him on milk diet. Under this treatment he did much better. As this man was getting stimulants before his admission I have tried 'the other tack,' and he has very markedly improved in every respect. We are also giving Pott's one grain of opium three

times a day.

"Case III is more extraordinary; not so common, not so useful to you. He is a gamekeeper, aged 40. While getting over a wire fence he scratched his leg, which set up inflammation in the vicinity, and he came in with phlegmonous erysipelas of the leg. On admission he had a quick pulse and a high temperature. I saw him on the evening of his admission, and as he was exhausted and becoming delirious I ordered stimulants. Next day he was no better. On the following day I made a long deep incision in the thigh, to which the erysipelas had by this time extended. On the day after his admission we noticed that two toes of the left foot were gangrenous; they were mottled at first but soon became black. In a day or two he complained of sore throat and of having a cold. On examination, we found the posterior palate and mouth inflamed and somewhat swollen. Ordered mustard poultice to the throat and tincture of the muriate of iron internally. Two days later he had acute glossitis which caused

great pain and salivation. The tongue was very bulky, so that the mouth could with difficulty be closed; even the breathing was interfered with. The inflammation was entirely unilateral, being confined to the right side of the tongue. A leech quickly brought it down. Now you will see a deep furrow on the right side of the tongue, but I made no incision; a slough must have formed there and separated. Two days later there was a superficial erysipelatous blush over the right hand and forearm. On the same day the bowels became loose. On the following day patient complained of great pain in the left knee joint. It soon became painful even on light handling, and it appeared as if there was fluid in the joint. It looked as if there was suppuration of the joint although it had begun with synovitis. He lies in this state now with a pulse of 112, and a temperature of 104° Fah."

March 15. This patient died on the following day: no post-

mortem allowed. The other two cases are doing well.

From Dr. Dunlop's Wards.

ADENOID TUMOUR OF PAROTID GLAND-REMOVAL BY THE THERMO-CAUTERY-USE OF THE THERMO-CAUTERY IN OTHER cases.—M. D., at. 36, was admitted on 3rd March, 1879, to Ward XXIII, with a tumour situated in front of and below the right ear, extending from the external meatus to the angle of the jaw. It was evidently very vascular, and from one or two erosions on its surface frequent spontaneous bleedings had occurred and were still taking place. About two years ago she received a blow on the ear, and shortly afterwards a small hard tubercle appeared immediately in front of and below the orifice of the external meatus and connected with the lobule of the ear. It gradually increased in size till it attained its present magnitude, involving the lobule in its growth, which it has now considerably elongated. It appears from her statement to have been almost from the first attended by a discharge of a sanious character, accompanied by a dull aching pain which has increased with the growth of the tumour. Dr. Dunlop, on examination, made out that it was intimately connected with the parotid gland, and also with the cartilage of the external meatus. 8th March. Considering the very vascular character of the tumour, Dr. Dunlop deemed it advisable to operate this morning with the thermo-cautery in place of the ordinary scalpel. The operation was begun however, with the knife, in order to judge of the amount of bleeding which might be expected, and also because of the cleaner edge

which the knife makes through the skin. In doing so several vessels had to be tied. This being done, the cautery was employed during the rest of the operation. It cut through the tissues easily, and with a well defined incision, layer after layer being divided almost as sharply as with the knife. Bleeding was certainly conspicuous by its absence, the view of the parts not being for a moment interfered with by a drop of blood. On removal of the tumour a raw surface was left which is to be allowed to granulate. It is dressed with antiseptic gauze. The following is Dr. Foulis' report:—"It is an oval firm tumour about the size of a goose egg, covered by thin eroded skin which appears to be involved in the tumour, and to be perforated by the tumour substance in one or two places. being cut into, the substance of the tumour looks exactly like the roe of a cod. Towards the attached part of the tumour there has been extravasation of blood into the tumour substance, but there is no trace of any cyst wall or any cyst development. Under a low power the section of the tumour exhibits closely packed rounded and oval masses separated by a thin stroma, and under a high power these masses are seen to be composed of gland cells arranged round the wall of the acini as well as completely filling up their interior." March 14. We saw the patient again to-day, when Dr. Dunlop brought before his clinical class one or two points in addition to the above. The slough was now almost entirely separated. It had been a thin superficial slough, and as a rule the cautery does not penetrate deeply. There is no inflammatory blush round the margin of the wound nor any general tumidity of the cheek. tumour has been entirely removed, together with a considerable portion of the parotid gland. The anterior margin of the elongated lobule has also been taken away along with a part of the tragus and antitragus, but an after operation is proposed to render this deformity somewhat less apparent. Dr. Dunlop has found the thermo-cautery very valuable in other cases. In operating for phimosis caused by the presence of a soft chancre, the great likelihood of the cut surfaces becoming inoculated is recognized by every one. This is much less likely to happen if the cautery be employed. He has also within the last few weeks performed tracheotomy with the cautery in three cases of croup, two of which have been successful. There were no vessels even seen during the operation, and it was also found that the tissues retracted in such a way on being cut as to expose the trachea very freely; it however was cut with the ordinary scalpel. The resulting wound was very patent, and rendered the removal and reintroduction of the tube an easy

matter. One disadvantage is that the local action is apt to be excessive, and in one case there was a good deal of suppuration while the slough was separating. It did well however, and on the whole Dr. Dunlop is inclined to look favourably on this method of operating.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1878-79.

MEETING VI.—10th Jan., 1879.

DR. FERGUS, PRESIDENT, IN THE CHAIR.

DR. JOSEPH COATS AND DR. GEORGE S. MIDDLETON READ "ON DESCENDING SECONDARY SCLEROSIS OF THE BRAIN AND SPINAL CORD, IN A CASE OF HEMIPLEGIA," and showed numerous illustrations and microscopic preparations. This paper will be

found at p. 257 of this issue.

Dr. Gairdner prefaced his remarks on the clinical aspects of the case, by pointing out that this communication well illustrates the course and methods of modern research. It brought clearly out the fact that the use of exact methods of observation—e. g., those of modern physiological histology and physiological chemistry—was now of such paramount importance in relation to clinical and pathological works that it was not possible that even the most familiar facts of disease could be adequately investigated and reported on any other than the co-operative principle.

The subject of the lesions described by Dr. Coats was a married woman, who was probably 23 or 24 years of age when seized with the first distinctly appreciable symptoms of hemiplegia, and at her death was 27. There was thus a period of about three or four years during which the secondary pathological changes in the nervous system may have been in progress. But it is impossible to be quite sure of the actual period of origin, either of the changes in the nervous system, or of others probably anterior to these. She married between 17 and 18

years of age, and was the mother of four children, her health being exceptionally good up to the birth of the third child, and even to the commencement of the fourth pregnancy. Her condition, even in illness, was more than commonly florid, and apparently well nourished; in fact, these appearances rather tended to increase than otherwise, when, in consequence of paralysis, she was compelled to forego her active habits. When first seen in the end of January 1875, she had been continuously hemiplegic for some months (probably indeed longer), and apart from her infirmity and the physical signs of heart disease presently to be mentioned, she might have been supposed to be in perfectly good health and condition of body. Dr. Gairdner went on to say that it would tend to make clearer the clinical narrative if he spoke of the two leading facts, 1st, the cardiac, and 2nd the cerebral lesion (both of them distinctly ascertained on her first admission) rather in the probable order of their pathological sequence, than in that of their apparent clinical

priority.

The origin of the cardiac lesion was obscure, inasmuch as although easily detected through its very distinct physical signs, and always regarded as an important factor in her case. her own sense of its presence was at first very indistinct, and the symptoms were limited to a very moderate degree of palpitation on exertion, which was not spontaneously complained of, and might therefore have escaped notice. She confessed, however, to having had severe pain in the left side of the chest about the time of the alleged commencement of the nervous symptoms, i.e., about a year before the better defined attack which ended in paralysis. No rheumatic antecedents could be traced, nor was there anything in the circumstances of her first three confinements to lead to the suspicion that she was then otherwise than perfectly healthy. The physical signs were in all respects those of mitral obstruction, with the characteristic prolonged and rough auricular-systolic murmur, and accentuation as well as reduplication of the second sound. Latterly, rheumatic pains, with febricula, and even temperatures rising to 102°4 as a maximum occurred; and ultimately pericarditis with pleurisy, and hæmorrhagic condensation of the left lung induced the fatal result. The cardiac hypertrophy had also been regarded as slowly increasing: but up to the time of these last superadded symptoms she preserved in a great degree the appearance of a patient suffering from disease of the innervation only; and it would certainly not have been difficult, up to within a few months of her death, to have overlooked altogether the cardiac complication.

There was a somewhat similar difficulty in ascertaining the exact origin of the paralytic symptoms. Her own consciousness referred to an attack somewhat similar to the one for the consequences of which she was admitted, and occurring a year before the distinct and continuous hemiplegia for which she came to be under treatment. Her testimony, however, was not very clear, and was to a certain extent under suspicion from an infirmity of memory, which appeared in various particulars, and also from what was regarded as a somewhat hysterical state of the constitution, leading to numerous "fits," characterized by tremors and quasi-convulsive phenomena, but not, for the most part at least, by loss of consciousness. The most definite commencement of the well characterized hemiplegia that could be ascertained was about seven months before she was admitted to hospital, and when she was within a week of her fourth confinement; she herself connected this attack with the administration of some medicine by the doctor to ease what were regarded as spurious labour pains. Immediately after taking this medicine she was seized with violent pains in her head, and in the right arm and leg, and was in a semiconscious state till after her delivery, which took place within forty-eight hours. On her recovering consciousness she seemed to have been all but completely paralysed in the right arm and leg, and considerably also in the face. She was (as she affirmed) unable to move herself in bed, and, though quite rational, was incapable of conversing, partly (it might be inferred) from aphasic complications, and partly from difficulties of articulation, the saliva dribbling away from her mouth, and mastication being also considerably interfered with. A slow improvement took place from this time forward, so that on admission she had considerable control over the lower limb and some over the arm above the elbow, the fingers, however, being permanently rigid and bent into the palm, and the whole arm much more disabled than the lower extremity. The paralysis of the face was but slight, and diminished still further under treatment, which also produced sensible improvements in other respects. Menstruation was both irregular and scanty from the period of the attack until her death. temperature during the first period of treatment was strictly normal. There was no family history distinctly pointing to nervous disease. The first admission to the hospital was on 28th January, 1875. The treatment was mainly by the induced current; and there was in the Journal the following note, by Dr. Finlayson, who was kind enough to make the examination into the state of the muscles:

"February 2nd.—Muscles tested to-day with the induction apparatus. Flexors of right forearm found considerably flexed and somewhat rigid. Extensors, however, respond pretty naturally to moderate currents. Muscles of the right leg also tested shortly, and seemed natural, but no prolonged investigation made.

"Immediately, or very soon after the application, which did not seem to cause her much disturbance, she was noticed to be shaking on the *left* side, both arm and leg; this seemed to be unaccompanied by any centric disturbance, and she said she would soon be better. In a minute or two this ceased, she sat up and took a drink. It seemed something like hysterical

shaking."

So much for the first admission. She was admitted the second time 13th January, 1876. She stated that she had been at one of the convalescent homes several times, and that while there last in December, she had four or five "fits," which lasted for about two hours. While in them she was unconscious, and the attendants remarked that there were tremors in the left arm and leg. This was so stated by the doctor who took note of the fact as curious that it was in the non-paralysed limbs. This concurred with her own recollections when emerging from the "fit;" and with the observation of Dr. Finlayson, formerly recorded. On examining her on this occasion, it was found that there was no great change since she was last dismissed. The subjective symptoms of various kinds (perhaps partly hysterical) had increased. The mitral murmur remained unchanged. There was, perhaps, a little more hypertrophy of the heart. There appeared to exist no anæsthesia on the paralysed side. She complained of severe pains in the limbs, especially in the left (non-paralysed) arm, but also in the other arm and leg. These were apparently much relieved by salicin in full doses. Temperature, with frequent evening rise, 100° to 102°.6. Urine normal, but rather scanty. On this occasion as well as on all the other occasions, except the last, she was dismissed improved under treatment.

Her third admission was on 17th January, 1877. The quasihysterical symptoms had increased, and she complained a great deal of pains in her limbs, and of a pain, not altogether free from the suspicion of being gouty, in the great toe. In regard to the heart there appeared to be an increase in tranverse area of cardiac dulness, both to right and left. Otherwise there appeared to be little change in that region. No albumen in

the urine.

Her fourth and last admission was on 15th September, 1877.

On this occasion all the previous facts were verified. There were also decidedly febrile symptoms, with accelerated breathing and pain in the left side. Friction sounds discovered just at the right border of the heart, but on the left side of mesial line, synchronous with respiratory but not with cardiac sounds. There was some extension of cardiac dulness. Temperature of six days 100°6 to 102°4. Urine now albuminous for the first time, and it so continued up to her death. There was a rapid increase of pericardial effusion, which, however, diminished again, and with evidently cardiac friction sound. The fatal event was also associated with gradually progressive hæmorr-

hagic condensation of the lungs.

Now, a remark or two on some aspects of the case. First, as to late rigidity, this was a typical case. Todd, who promulgated the theory of irritation, thought that in hemiplegia a part of the brain was lost, the parts around being the subject of inflammation. Dr. Coats' theory, that this rigidity may depend on the suspension or abolition of the powers of the higher over the lower centres, was certainly very plausible. The quasi-hysterical symptoms in this case may also have resulted from the same cause. He would like to hear what Dr. Coats had to say with regard to the tremblings on the left side. In regard to the tendon reflex he had made no observations in this case. Since that time he had seen two very interesting cases, approaching to Erb's spastic paralysis. At a late stage of the case there was a certain amount of atrophy of the paralysed muscles, but by no means considerable. This corresponded to the typical cases given by Erb. In true spastic paralysis, as in this case, there was the absence of anæsthesia; but in this woman the tactile sensibility had latterly suffered to a considerable degree.

Dr. Foulis said that information should have been afforded not only as to the condition of matters from the point at which Dr. Coats had started downwards, but they should also be told what were the appearances from that point to the surface of the brain. An explanation of the phenomena of late rigidity might be given on every day surgical principles. Every surgeon was aware that a limb kept for a course of ten days in splints became stiff. They did not suppose that in that case the higher centres had ceased to dominate the lower. There was simply a local change from want of use. Might not this simple explan-

ation apply in the present instance?

Dr. Finlayson said that one would suppose from Dr. Coats' theory of late rigidity (and the same remark applied to Dr. Foulis' theory) that all cases of hemiplegia were characterised

by rigidity. His experience was that it was only an occasional accompaniment of the affection. But if these theories were true one would always have this phenomenon present. Dr. Coats' theory also supposed that the rigidity came on early,—he said about the first or second month. His observations

led him to believe that it came on at a later period.

Mr. John Reid said this appeared to be an ordinary case of hemiplegia. He was inclined to think that the history of the case was different from that drawn by Dr. Coats; that the state of bad health manifesting itself in heart disease, lung disease, and pericarditis was the consequence and not the cause of the pathological changes which he described. In saying that paralysis arose from an affection of the lateral part of the cord, Dr. Coats contradicted Sir Charles Bell, who laid it down that motor paralysis arose from an affection of the anterior part of the cord. Mr. Reid also strongly indicated his opinion that modern minute pathology had little or no bearing upon practice. He deprecated a pathology which did not serve as the handmaid of treatment.

Dr. M'Call Anderson said that Dr. Coats had greatly enhanced the value of his paper by interweaving clinical symptoms with pathological anatomy. The case was probably due to embolism. This was indicated by the coincidence of disease of the mitral valve, with paralysis of the right side. He might recall to Dr. Coats' recollection a case in which there was marked disease of the valves of the heart, and in which he (Dr. Anderson) had diagnosed embolism of the brain, of the spleen, and kidney. At the post-mortem, embolism in the two last organs was verified, but in the brain there was found ruptured a small aneurism. The paralysis was on the left side. In regard to the late rigidity, he believed with Dr. Coats that it was due to secondary sclerosis of the lateral column. Todd's suggestion that it was due to irritation might be true with regard to early rigidity, but not to late rigidity. In the former case it was found that Faradisation was suitable; but in the later stages it did positive harm. The lesion in the toe in the present case was probably, like the paralysis, produced by embolism.

Dr. George Buchanan pointed out that the case was interesting in its physiological aspects. He well remembered the consternation with which he witnessed the experiments of Brown Sequard. Before that time he had constructed a wooden model to represent the functions of the columns of the cord, as these were laid down by Todd, following Bell. These experiments of Brown Sequard completely demolished these

views of the physiology of the cord. This case completely corroborated the results of these experiments. The pathological changes, as depicted by Dr. Coats, exactly accorded with the views taught by Brown Sequard in regard to the motor functions of the cord.

Dr. Weir mentioned a case in which there was latterly paralysis of the left leg and also tremblings, and atrophy of optic nerve. At the post-mortem examination a tubercular tumour was found occupying the optic thalamus on the right side. In this case the tremblings occurred on the opposite side from the legion.

Dr. Glaister said that Wilks and Moxon had given granular masses and amyloid corpuscles as characteristic of sclerosis. Dr. Coats had not mentioned the presence of either of these appearances. He would like to know whether in this case they were present? In regard to the tremblings on the sound side might it not be explained by the disturbance of the balance of nerve power, the absence of innervation on the one side

causing an excess of normal nerve power on the other?

Dr. Joseph Coats, in reply, said that in regard to the remark of Dr. Finlayson, that late rigidity came on later than sclerosis, it must be remembered that this process was gradual, and probably was not completed for a great many months. beginning of it was some six or eight weeks (and even earlier) in manifesting itself. There was no incompatibility in regard to time. In reply to Dr. Foulis' query, he had to state that he pointed out in his paper that though the motor convolutions near the surface were much withered there was no special lesion. With Mr. Reid's remark, that the case was one of an ordinary nature they would all agree; but it was of great importance to elucidate points connected even with very To Mr. Glaister's question he replied, that he common cases. had detected in the crus cerebri compound granular corpuscles. In no other place except the corpus striatum were there any found, and there were no amyloid bodies. These latter, indeed, might, as characterising the lesion, be pretty much ignored. He agreed in opinion with Dr. Anderson as to embolism having been the cause of the affection in the present case.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Session 1878–79.
Meeting IV.—February 10th, 1879.

Dr. Hector Cameron, Vice-President, in the Chair.

CASES OF INTESTINAL OBSTRUCTION.

Dr. Joseph Coats showed a specimen of obstruction of the BOWEL FROM TWISTING OF THE SIGMOID FLEXURE ON ITS AXIS. -The patient, a demented man, resident in Gartnavel, had suffered from symptoms of obstruction of the bowel for eight The symptoms were not very acute, and there was no There was great distension of the abdomen, for which acupuncture was performed twice, but without any obvious relief. On post-mortem examination the appearances shown to the Society were found. The sigmond flexure was enormously distended, looking, at first sight, like a much dilated stomach, so that it almost filled the left side of the abdomen. passing up to the left hypochondre. On careful examination it was found that the flexure had twisted on itself, making two half turns. At the place of twisting there is great constriction of the calibre of the gut and some thickening of the mesentery and peritoneal surface; the rectum was considerably dragged on.

It should be added that this is the third occasion on which this patient suffered from symptoms of obstruction, the other

two attacks having been recovered from.

DR. FINLAYSON showed a preparation from a case of INTESTINAL OBSTRUCTION, DUE TO EPITHELIOMA NEAR THE ILEO-CŒCAL VALVE, which had undergone colloid degeneration. The patient was a sailor, 22 years of age. The illness had run a course extending over $3\frac{1}{2}$ months, and the obstruction had given way more than once during his residence in the Western Infirmary, and just at the end diarrhea had supervened. (See Glasgow Medical Journal, January, 1879, p. 63).

DR. MOYES and DR. JOSEPH COATS showed a case of ULCERATION OF THE VERMIFORM APPENDIX—PERITYPHILITIC ABSCESS—AND PERFORATION OF CAPUT CŒCUM COLI.—Dr. Moyes, of Cambuslang, related the history as follows:—The patient was a collier, 23 years of age. He complained first of pain in his

abdomen, on 30th December. During the night of 1st January this pain became so intense that he sent for medical assistance. When seen he was evidently suffering greatly. The pain came in paroxysms, which caused him to cry out; it was not increased by pressure, and he could not refer it to any one spot. was given 60 m of liq. morph. Next morning pain was much the same, pulse 130, temperature 102°. Nothing was found to account for the pain. Gave dose of castor oil and laudanum. Towards evening some liquid fæces were passed but without relief. Patient was now put under the influence of opium, and from this date (2nd January) till 10th January had no motion of the bowels, though frequent injections of soap and water, turpentine, and assafætida were given. During this period of stoppage the abdomen became gradually distended, and at last assumed such enormous proportions, and aggravated the patient's sufferings so much, that puncture was resolved on. This was twice done with a small trochar and cannula, first in the situation of the ascending colon, and then in the median line a little below the umbilicus. Neither could be said to be successful in relieving the tympanitis, only a little air and some fluid fæces escaping.

On the next day puncture with a subcutaneous injection needle was tried with more success. On 10th January the bowels moved spontaneously, and for five days they kept moving at intervals of a few minutes. The fæces were liquid, and of a light yellow colour. The abdomen, while this went on, fell gradually, and at last was quite flaccid. In the right iliac fossa, to which the patient had latterly referred his pain, there was now found a slight fulness, and this region was tenser and more resistant to pressure. On light percussion it

gave a comparatively dull note.

While the bowels moved there was a general improvement in the patient. On 16th January the bowels again ceased to move, the abdomen swelled as before, and he went back to his former condition. This stoppage lasted five days. On 21st January they again moved for two days and then ceased.

Patient sank and died on January 25th.

Dr. Joseph Coats showed the preparation from this case, and pointed out that the vermiform appendix is adherent about its middle, and again at its tip, being bent nearly at right angles at the place of adhesion at its middle. Beyond this point the appendage is the seat of an ulcer, which completely exposes its calibre, and from the bottom of which grows a sessile fungating projection. To the proximal side of the ulceration the wall of the appendix is very thin. There is considerable

dilatation of the appendage before the ulceration is reached, and in the dilated part a body was found having a close resemblance to the stone of an orange. Microscopic examination, however, showed that it was not the stone of an orange, but composed simply of debris and the mycelium of a fungus, so that it is really inspissated fæces, of which these concretions are usually composed. It is to be presumed that a similar concretion had caused the ulceration of the appendage already described. Around the appendage there was a large abscess, the size of which may be judged from the fact that, though it was found with only a few ounces of pus in it, it extended as far as the spleen. The reason of the pus being in such small quantity seems to have been that the abscess had opened into the cœcum. The apertures of communication between the abscess and colon were large and circular, presenting the appearance as if large portions of the entire wall of the gut had been punched out. It was interesting to find evidence that these apertures had been produced by sloughing of portions of the intestinal wall. A piece of the colon above that in which the apertures existed was shown, in which the mucous membrane was undermined, and a circular portion of it as if just about to slough, being soft, pale, and partially shreddy in appearance. Dr. Coats remarked that the course of events seemed to him to have probably been: First, the formation of a concretion in the appendix, succeeded by inflammation and ulceration, the adhesions of the appendage being probably of this date; succeeding the ulceration, local peritonitis and abscess; then undermining of the caput cocum, and sloughing of its coats with free perforation.

Dr. Brock showed a case of intestinal obstruction from a cancerous tumour in the transverse colon. The parts were from a man 51 years of age, who had been for 22 years manager in a chemical work. In the manufacture of pitch oil he was in the habit, at least twice a week, of clearing out a horizontal pipe by which the oil was run off. For this purpose he used a hot iron, the end of which he rested on his abdomen in order to get sufficient power. This process took about an hour each time. The situation of the tumour is important in this connection. In the summer of 1876 he was troubled with constipation, for which he was thrown off work for a week twelve months later, at which time he had hæmorrhage from the bowels. Three months after he was again confined to the house with constipation and severe vomiting. The constipation was relieved after five days by large doses of castor oil,

&c., and he enjoyed fair health for three months. Five months ago (in August, 1878) he had another attack of the same nature, and there was a repetition of them at intervals of three or four weeks up till his death on 20th January, 1879. From the first he complained of fulness and pain over the

region of the stomach.

On post-mortem examination, the transverse colon was found firmly adherent, about its centre, to the anterior abdominal wall by a somewhat narrow band. The gut here was greatly constricted, so as hardly to admit the tip of the little finger. On opening up the gut the constricted portion was seen to be occupied by a ring-shaped tumour, having rather abrupt edges above and below, but excavated by an ulcer in its central part. Its length, from above downwards, was about 11 inches, but the gut is a good deal dragged in, and puckered around it. Under the microscope, the tumour shows the characteristic stroma and cells of a cancer. There were other secondary tumours in the liver, spleen, peritoneal surface of bladder, intestines, diaphragm, &c., but none in the stomach. One point of great interest in this case is the connection of the occupation of the man with the situation of the tumour in the middle of the transverse colon.

Dr. Charteris sent for presentation to the Society an EPITHELIOMA OF THE SIGMOID FLEXURE, FOR WHICH GASTROTOMY HAD BEEN PERFORMED. A man, aged 46, a miner, had suffered four or five months before admission into the hospital, from stoppage of the bowels. This passed away but recurred three weeks before admission, at which time he had not passed anything for thirteen days. The abdomen was tense and hard, and nothing could be retained in the stomach. He was treated by calomel, and subsequently by extract of belladonna and opium. Sub-

sequently Dr. Cameron had to do with the case.

Dr. Cameron remarked that on seeing the case he resorted to colopuncture of the descending colon, which somewhat relieved the patient; but on repeating the operation on the ascending colon next day, less relief was obtained. No movement of the bowels being gained by these means, he opened the abdomen, with antiseptic precautions, in the middle line, and managed to separate some adhesions near the caput cocum coli. At the same time he became aware of a hard nodular tumour at the junction of the rectum and the sigmoid flexure, and considering it to be cancer left the mass untouched, and stitched up the wound with carbolised silk. On the following day the patient had two copious motions from the bowels (the

first for three weeks), and doubts were raised as to the diagnosis of cancer of the sigmoid flexure, it being thought that the hard lump might have been merely fæces. The temperature fell to the normal, the belly became flaccid, and hopes of recovery were entertained, but patient became weaker, and

died in thirty-six hours after the operation.

Dr. Foulis made the post-mortem examination, and found a mass of epithelial cancer at the junction of the sigmoid flexure and the rectum, which so occluded the bowel that the tip of the little finger could not be passed through the stricture. The colon was enormously distended with semi-fluid fæces. There was extensive recent peritonitis. The skin wound was united, but the peritoneal aspect of the wound was not quite closed, the stitches being in places bare and exposed, while in other places they, and the lips of the wound, were covered with lymph.

Dr. Cameron referred to cases in which abdominal section was performed for obstruction and nothing was found, the patient making a good recovery, as in a case by Dr. Buchanan, and one by Lawson Tait; and he further illustrated the fact that tight strictures of the bowel do now and then yield for

a time.

Discussion being invited on these cases of intestinal obstruction, Dr. M^*Call Anderson said that most of these obstruction cases were due to cancer, and gave details of a case in which an old man who had been subject to occasional obstinate constipation was suddenly the subject of obstruction, for which remedies had proved ineffectual. In a few days the bowels moved freely, and there was diarrhea for a time. Three months later death took place from exhaustion, and on post-mortem examination a stricture of the ascending colon was found, which was said not to be true cancer. Clinically the case was one of cancer.

Dr. Finlayson had seen Dr. Moyes' case after the first relief to the bowels, and as surgical interference seemed then out of the question he had not recommended the removal of the

patient to the hospital.

In reply to a question from Mr. Clark, Dr. Cameron said that he had pushed his hand into the rectum but failed to get

beyond the promontory of the sacrum.

Dr. Foulis referred to a case in which Gussenbauer had excised a cancer of the descending colon, with a fatal issue not directly traceable to the operation; and also detailed a case in which fatal obstruction had taken place by one part of the

small intestine tying a knot with another part like a surgeon's knot.

Dr. Macewen said, acupuncture of the bowel and antiseptic gastrotomy were valuable measures, even from a purely diagnostic point of view; especially if the incision were so small as merely to admit two or three fingers at first. Even in the presence of peritonitis no harm was done if the wound was antiseptic.

Dr. Finlayson referred to a case of his in which Dr. Patterson opened the abdomen to relieve constriction of the bowel by a band of adhesion, four days after the commencement of the symptoms. At that date there was no fever or effusion, but death took place three days after the operation from peritonitis, although the operation was easily accomplished and performed with antiseptic precautions.

Dr. Samuel Sloan showed a case of extroversion of the bladder there was complete epispadias. Three weeks ago Dr. Hector Cameron operated by Wood's method, which, however, had to be modified on account of the presence of double inguinal hernia and umbilical hernia. Of these the right inguinal hernia was much the largest, and therefore an effort was made to avoid it by taking the superficial flap from the left side alone. The operation was successful so far, and the tender surface of the bladder was now covered in. An attempt was about to be made to cover over the open channel of the urethra by scrotal flaps. In operating for the extroversio vesicæ Dr. Cameron fixed the end of the penis by a silver wire stitch to the scrotum, and this prevented the retraction of the penis behind the skin flaps over the bladder as sometimes occurs.

DR. Joseph Coats also showed a Melanotic cancer removed from the axilla by Dr. Macleod. The patient, a man of rather intemperate habits, complained about a year ago of a ragged ulcer on the dorsal aspect of the last phalanx of the thumb. The physical condition of the man was very poor. Means being taken to improve his general health, and the ulcer having been pared, considerable improvement took place. Last summer he was again seen by Dr. Macleod, with a very ugly fungating growth in the same situation. At this time the last phalanx of the thumb was amputated, the flap being obtained from the palmar aspect, which was unaffected. The wound healed well. The man returned lately, and referred to a tumour in the axilla, which he had noticed some two months

before and which was then the size of a walnut. It was now of large size, having grown very rapidly, but it was freely movable, and not adherent to the skin. The tumour was removed. It consists of one main mass and several smaller pieces. The main tumour is about 4½ inches in length, forming a flattened oval. Its colour to the naked eye is nearly coal black, and its consistence very soft and friable. The juice, under the microscope, shows the large variously shaped epithelioid cells with oval nuclei, which are so characteristic of cancers. It is remarkable that the greater proportion of these cells are uncoloured, but there are a few filled with a deep brown pigment. On using means to get rid of the cells so as to display the stroma, this is seen to have a very characteristic appearance. There are coarser and finer trabeculæ, presenting a beautiful reticulated appearance, in the meshes of which there still remain occasional collections of cells. The stroma contains pretty frequent brown pigment cells.

Dr. Coats remarked that this is an undoubted case of cancer, the fungating ulcer of the thumb being, doubtless, a primary melanotic cancer, though not examined. Melanotic tumours are commonly sarcomas, but when sarcomas form secondary tumours the infective material is nearly always carried by the blood-vessels, and the tumours form in internal organs such as the lungs. With cancers it is different; they generally occur secondarily in lymphatic glands, and this case conforms to that rule.

DR. JOSEPH COATS also showed a SARCOMA OF THE LEG WHICH HAD GROWN FROM A SOFT WART. The tumour was removed by Dr. Borland, Kilmarnock, to whom we are indebted for the following note:—"Mrs. C., et. 52, thirty years ago had a wart about the size of a pea on her left leg, inside and below the knee. Six years ago, when her menses ceased, it began to increase in size. She bandaged it, thinking it due to varicose veins. It became rounded, red, and like a cherry, but larger. It was covered by a thin skin. Six weeks ago it broke, when about two-thirds of its present size—a watery fluid exuded—a clot gradually formed on the surface, bringing it up to its present size. She never lost any blood by it, nothing to stain the cloth ever having come away."

The tumour is circular in shape, about $1\frac{1}{2}$ inches in diameter, and projects from the surface like a truncated cylinder. The skin is continuous over its lateral aspects, but at the summit it is replaced by a dark brown structure. On section there is seen to be a deeper, somewhat transparent, tissue, and a super-

ficial material, partly of the colour of blood clot, and partly grey or yellow. On microscopic examination the deeper portion is seen to be composed mainly of spindle cells, while the superficial part consists of blood clot and fibrine variously altered. In some parts the fibrine presents a peculiar alveolar appearance, and sometimes the alveoli are filled with bacteria or micrococci. Acetic acid causes the fibrine to swell up, and it is then seen that it has no organized structure.

Dr. Macewen showed a fatty tumour weighing a pound and a half, and measuring 16 inches in circumference, which was removed from the back of the head and neck of a man about 45 years of age, who had been affected with it for seven years. It had the ordinary indolent character of fatty tumours. Patient sought its removal on account of its bulk and unseemly appearance. Its situation was its only peculiarity, being half on the neck and half under the scalp.

Dr. Macewen also showed a Bursa removed from the SURFACE OF THE PATELLA. It occurred in a woman about 40 years of age, who had been in the habit of working on her knees. She thought that it had only existed for about nine months, but from its appearance one would judge it to be of longer duration. It was about the size and shape of an average orange, its walls being thick and firm, though they permitted fluid to be detected in the interior. It was removed by a longitudinal incision through the skin, then dissected out entire. The cyst contained a quantity of red coloured serum, with flakes of organized fibrin. On section it presented a fimbriated interior, bands of organized fibrin stretching irregularly across the inner surface; some of these were white and attached only by one border, the other border and two sides lying free in the cyst. To the end of the free borders were attached a very considerable number of small red fringes about a quarter of an inch in length, and resembling in colour, and slightly in form, the choroid plexus. Some of them lay like the laminæ of a crab's lung, while other portions, apparently of the same material and structure, were free in the cavity. Besides, there were some detached particles of various sizes, which appeared like pieces broken from the white bands described above.

Dr. Renton showed an example of Syphilitic ulcer in the leg of a patient which he had amputated that afternoon. The patient, a female, aged 45, was married when she was 25,

and had had six children, three of whom died in infancy from congenital syphilis, and the remaining three showed syphilitic symptoms during childhood. She also had had repeated miscarriages, and fourteen years ago her left lower limb was affected by severe ulceration, which has continued ever since until now, when the bone of the ankle was affected, and she was quite unable to put her foot to the ground. Cicatrices extended above the knee joint, so that amputation in the middle third of the thigh was determined on.

Professor M'Kendrick kindly administered the commercial form of ethidene dichloride, which acted well, the patient being unconscious in three minutes, and being easily kept so

during the operation.

Dr. Macewen showed a wound after ovariotomy; including part of the front wall of the abdomen, with the united wound, from a case which terminated fatally forty-eight hours after ovariotomy, owing to cardiac complications. The wound, which had been sewn up with catgut, was quite united, and the whole of the peritoneal aspect was evenly coated and cemented with firm lymph. There was no fever or peritonitis at or after the operation.

MEDICAL ITEMS.

UNDER THE DIRECTION OF

ALEX. NAPIER, M.D.

Successful Treatment of Aortic Aneurism by Electrolysis.—M. Bucquoy has reported a case of this kind, and shown his patient to the members of the Academy of Medicine (Bull. de l' Acad. de Med. No. 3, 1879). The aneurism sprang from the ascending aorta, spontaneously, in a female aged 58. About two years after its commencement, the tumour had made, on the right side of the sternum, a considerable projection, which occupied the second, third, and fourth intercostal spaces, and which measured about 12 cm. transversely, by 8 cm. vertically ($=4\frac{3}{4}$ by $3\frac{1}{4}$ inches). In the tumour, no vestige of ribs or their cartilages could be found. M. Bucquoy, encouraged by the lateral situation of the aneurism, pressed also by the imminent danger of accidents, determined to apply electrolysis, after the method of Ciniselli. The first sitting

took place on the 12th June, 1878, under the supervision of Dr. Dujardin-Baumetz, and according to his modified method. Two needles were thrust into the most projecting parts of the tumour to a depth of 21 cm., and were placed alternately in contact, for the space of five minutes, with the positive pole of a Gaiffe's pile, the negative pole of which was applied to the patient's thigh. The whole time occupied by the passage of the current was limited to twenty minutes. The operation caused very sharp pain, which was followed by inflammatory tension of the tumour, with tenderness on pressure. But at the same time the general symptoms rapidly subsided. The dyspnæa was diminished, and sleep rendered possible. After fifteen days, a second operation was followed by the same phenomena, and by a marked subsidence of the projection. After three more operations, the tumour was in great part solidified, and the patient was sufficiently well to leave the hospital and return to her work. Two months later she returned quite worn out and very breathless. The sac of the aneurism was again much enlarged, though it had not nearly reached its former size. Four more sittings put an end to all the symptoms, and reduced the aneurism to its present condition. The contracted wall of the sac forms a hard plate, slightly yielding to pressure, and of a fibrous consistence; at its upper extremity there remains a small sharp projection, about the size of a small nut, which continues to pulsate. The cure is not therefore yet complete, but there is nothing to show that this will not yet be attained. M. Bucquoy considers that electrolysis may render great service in the case of sacciform aneurisms, with a narrow opening, and only implicating one point of the aortic wall. He thinks also that, in these conditions, the application of the negative pole should not cause any danger, and that we might return to the original method of Ciniselli.-D. N. K.

Treatment of Piles by Injection.—Dr. J. T. Everett reports that having noticed that the middle layer of hæmorrhoidal tumours, like that of veins, consists of fibrous tissue, which, in the former case, is greatly thickened and almost muscular in appearance, has suggested the hypodermic use of ergot, to produce contraction and absorption of the adventitious tissue. He has accordingly treated a series of cases with this and some other substances, with the following results:—In three cases 3-5 m of tr. fer. mur., either of full strength or diluted with an equal part of water, were injected into the piles, this proceeding giving rise to excessive pain and con-

siderable nervous shock. The tumours became black, shrivelled up, and in a few days dropped off, leaving a healthy ulcer which, on healing, was replaced by a broad cicatrix and great Two cases were treated with a few drops of a induration. mixture of equal parts of tr. fer. mur. and "aqueous ergot;" in these there was the same agonizing pain, and the results were nearly similar. One was treated with the elastic ligature, with a good result, but the patient was confined to bed for twelve days. One was treated with injections of equal parts of glycerine and carbolic acid, and four with carbolic acid and oil; in these cases there was not much pain, the tumours immediately turned white, dropped off in a few days, leaving a clean sore which soon healed; the scar, however, was large and hard. In ten cases the fluid thrown in was the solution of the aqueous extract of ergot, 5m to each tumour. pain attendant on the operation was but slight, and soon passed off, but was followed by a sensation of great constriction in the parts; the piles became black, hard, and contracted there was no sloughing, and the tumours subsided and eventually disappeared, leaving no cicatrix. There was also no systemic disturbance, several of the patients being up and about, one of them at work, on the day after the operation .-Med. and Surg. Reporter. 15th February, 1879.

Carbolic Acid Treatment of Piles.—At a meeting of the Therapeutical Society of New York, Dr. T. E. Satterthwaite reported having tried carbolic acid injections in three cases of bleeding hæmorrhoids, with decidedly bad results. In all of them the tumours became larger and much more painful, and protruded at the sphincter; one case ended in abscess, fistula, and eventually death from phthisis; in the second the patient was lost sight of, but suffered much at first from retention of urine; in the third the usual operation had to be performed a few days after the injection. In the first two cases Dr. S. threw in 8-10 m pure carbolic acid; in third he used 6 m acid and 6m glycerine. At the same meeting Dr. A. H. Smith related, in detail, two cases of piles, and mentioned shortly six others, in which he had used a watery solution of carbolic acid, with the most perfect success. He employs a fine hypodermic needle, the point of which is thrust into the centre of the tumour; ten or twelve drops of 1-20 or 1-30 solution of the acid are then forced in, till the pile is slightly distended. Trifling pain, sometimes only a little smarting, follows, and the patient is usually able to be out and at work the same day. In ten days the piles injected are at most half their former

size, when a second operation may be necessary. Dr. S. injects only one or two tumours at a sitting. He makes no reference to the presence of any ulceration or slough, or a hard cicatrix. There are two things that must be specially attended to; the needle must not be inserted too close to the base of the pile, and the solution of the acid must be perfect,—there must be no undissolved globules floating about in it. The conclusion arrived at by the writer is that "the injection of weak carbolic solutions is a means that can be safely employed in completely internal hæmorrhoids, or those that are more or less continuously protruding from the anus."—New York Med. Journal. March, 1879.

The Germ Theory and its Application to Medicine and Surgery.—Pasteur states (Bull. de l'Acad. de Med. 1878. Nos. 4, 8, and 18) his views on septic germs in the following thesis:—

1. There are several forms of scepticemia besides putrid

infection.

2. There are several septic vibriones whose physiological properties differ in some essential points; amongst these the septic vibrio properly so called is the most dangerous.

3. The septic vibrio does not require air to live in, but, on the contrary, prolonged contact with the air destroys not only

its virulence but also its life.

4. If it is developed in a liquid in contact with the air the liquid must have a certain depth, so that the vibriones in the deeper layers may be protected by those in the superficial.

5. The septic vibrio lives and multiplies both in a perfect vacuum and in an atmosphere of pure carbonic acid gas. In these conditions, however, it loses its filiform shape, and shrinks to the condition of a "corpuscle germ."

6. These germs may be carried like spray by the wind or

held in suspension by water.

7. Even in oxygen, under the pressure of several atmospheres, these germs preserve their vitality and power of reproduction.

8. These germs are fruitful in a perfect vacuum, or in pure CO₂, so long as they are provided with nutritive pabulum.

9. Among disease ferments and these organisms which provoke or complicate morbid manifestations, there are some which live only in air, others which live either with or without air, and others still which can live only without air.

10. The nomenclature and classification of vibriones based on morphological considerations by Cohn, Billroth, and others, can

no longer be accepted, as one vibrio may take on all possible shapes according to the medium in which it is developed.

11. The theory of germs demands by right the unremitting

attention of the surgeon and physician.

12. I will prove that the introduction of a minute microscopic being, hitherto unknown, into the living organism, produces the abundant formation of pus; that common water contains the germs of these organisms, and of others more dangerous, so that the simple washing of a wound with a wet sponge may produce consequences of the gravest kind, and which have not yet attracted the attention of the surgeon.

13. I shall show that if every wound when treated without antiseptic precautions, does not necessarily lead to death, it is due principally to the vital resisting power of the system.

14. That the open treatment of wounds, and the treatment

by irrigation, strongly support my theory.

15. Lastly, that inoffensive vibriones may develop on the surfaces of wounds under the dressings, and hence the presence of vibriones under Lister's or Guerin's dressings need not be accidental.—D. N. K.

Tartrate of Morphia.—Dr. J. A. E. Stuart recommends the tartrate as the best preparation of morphia for hypodermic injection. It is soluble in water to a great extent, without the aid of acids or spirits. It is bland and unirritating, being as mild as water. It can be kept fresh for any length of time. The solution is easily prepared; it is necessary merely to weigh out the required quantity of the salt, and dissolve it in warm water. The concentrated nature of the solution renders it also very convenient for administration by the mouth.—Edinburgh Med. Journal, March, 1879. [This solution seems to have one disadvantage; it is not reliable in very cold weather. Such, at least, was our experience one very cold night last winter, when the tartrate was found precipitated at the bottom of the bottle, while a small quantity of the old solution of the acetate, standing near it, was as clear as ever and ready for use.—A. N.]

Why Physicians should use the Metric System.—Dr. E. Wigglesworth gives the following reasons for the adoption of the metric system in prescribing:—Because it most nearly approaches to a perfect system. Because it is international. Because of its great convenience in writing and corresponding, in dividing doses, and in computing quantities. Because of

its safety, due to its uniformity and simplicity; it may be learned in five minutes, and the dangers resulting from the resemblance of the signs for scruple, drachm, and ounce are by its use avoided. It dispenses with the signs of quantities, and employs Arabic figures instead of Roman numerals. It is decimal, and a perpendicular line instead of the decimal points obviates any possibility of error from this source. It is exceedingly delicate and accurate, and provides denominations of weights applicable to the smallest quantity which the physician can prescribe, the old grain being by far too large and coarse a unit for modern medicine. It deals preferably with weights alone, while admitting the use, if desired, of both weights and measures as at present.—Med. and Surg. Reporter. 16th November, 1878.

Suggestions for Diphtheria, Acne, and Gonorrhea.—Dr. G. Law, having been attacked by diphtheria, adopted the following line of treatment:—He swabbed the throat every three hours with undiluted tincture of the muriate of iron, and took internally, at similar intervals, 5ii of citric acid in iced water sweetened liberally. At the end of two days, during which time he had taken over three ounces of the acid, the membrane was coming away in soft flakes, and convalescence, in other respects, was established; the urine, also, was very copious and alkaline.

For acne he advises that the patient should use common carbonate of soda and common soap in washing; this dissolves and removes impacted sebaceous matter. On drying the parts

the following lotion is to be applied:-

R. Acidi Acetici 5iv. Glycerini 5ii. Aq. Rosæ 5iss.

For Gonorrhæa he orders an injection of 1 ounce of tannic acid in 6 ounces of water, to be used in the way specified below:—The patient is first made to urinate, to wash out the accumulated matter, and then, a No. 6 or 7 catheter having been passed beyond the point of soreness in the canal, he is directed to make firm pressure on the tract of the urethra beyond the end of the instrument, so as to close the passage. Now, by means of a syringe, the nozzle of which fits the catheter, the urethra is to be washed out with cold water; when this is thrown in with some force the return current flows out at the meatus round the catheter. Finally, inject the tannin solution in the same way. This should be repeated twice a day, gradually weakening the solution.—Med. and Surg. Reporter. 16th November, 1878.

The Primary Anæsthesia of Ether.—Dr. J. H. Packard thus calls attention to the primary effects of ether: - "For the short operations of minor surgery, and the reduction of dislocations or opening of abscesses, it is extremely useful and of every-day application. When you wish to operate on a patient without causing him pain or incapacitating him from attending to his business for the remainder of the day, let him lie down on the sofa and take the ether inhaler—a sponge wet with ether—in his own hand, directing him to hold the other arm up in the air. After breathing the ether for a few minutes, the arm will drop, and you will have from thirty to fifty seconds of unconsciousness in which to operate. The sponge is removed, and the patient is ready to go about his business. It gives rise to no headache, nausea, or other unpleasant symptom, and is particularly useful in children. chief source of disappointment is in not recognizing the right moment, for, if this is allowed to pass, unconsciousness will not again occur until full etherisation. The first insensibility is sure to come. When the arm wavers, be ready, and as soon as it drops perform the operation; there will be no pain felt." -New York Medical Journal. February, 1879.

A Novel use for Apomorphia.—At a meeting of the Congrés pour l'avancement des Sciences, Dr. Th. Verger related the case of a child, aged nine years, who had a plum stone impacted in the gullet. He had, first of all, endeavoured to get her to swallow water, intending to use emetics, such as ipecacuanha, to cause the expulsion of the foreign body; but this was found to be impossible, as the stone so completely filled the esophagus that no fluid could get past it. No instrument being at hand by means of which extraction could be accomplished, recourse was had to apomorphia injected subcutaneously. Two injections were practised, the total dose amounting to two and a-half milligrams of the alkaloid (0.037) grain). In less than two minutes vomiting was excited, and the plum stone expelled. Vomiting occurred twice shortly afterwards. The girl then showed an irresistible tendency to sleep. She was unable to maintain the upright position, and muscular sense was abolished. Tactile insensibility was preserved, the skin became rather cold, the pulse small and slow, but respiration was unaffected. All these symptoms disappeared after the administration of a little strong coffee. There was no irritation at the seat of injection.—Bull. Générale de Therap. 30th September, 1878.

Classification and Nomenclature of Skin Diseases adopted by the American Dermatological Association. August 29, 1878.—Philad. Arch. of Dermatology. January, 1879.

Class I.—Disorders of the Glands.

1. OF THE SWEAT GLANDS. Hyperidrosis.

Miliaria crystallina.

Anidrosis. Bromidrosis.

Chromidrosis.

2. OF THE SEBACEOUS GLANDS. Seborrhœa: a. oleosa; b. sicca.

Comedo. Cyst: a. Milium; b. Wen.

Molluscum sebaceum. Diminished secretion.

Class II.—Inflammations.

Exanthemata.

Erythema simplex.

Erythema multiforme: a. papulosum; b. bullosum; c. nodosum.

Urticaria.

Dermatitis: a. traumatica; b. venenata; c. calorica.

Ervsipelas.

Furuncle. Anthrax.

Phlegmona diffusa. Pustula maligna.

Herpes: a. facialis; b. progeni-

Herpes zoster.

Psoriasis.

Pityriasis rubra.

Lichen: a. planus; b. ruber.

Eczema: a. erythematosum; b. papulosum; c. vesiculosum; d. madidans; e. pustulosum; f. rubrum; g. squamosum.

Prurigo.

Acne. Impetigo.

Impetigo contagiosa.

Impetigo herpetiformis.

Ecthyma. Pemphigus.

Class III.—Hemorrhages.

Purpura: a. simplex; \overline{b} . hæmorrhagica.

Class IV.—Hypertrophies, 1. Of PIGMENT.

Lentigo.

Chloasma: a. locale; b. universale.

2. OF EPIDERMAL AND PAPILLARY LAYERS.

Keratosis: a. pilaris; b. senilis.

Callositas. Clavus.

Cornu cutaneum.

Verruca.

Verruca necrogenica.

Xerosis.

Ichthyosis. Of nail.

Hirsuties.

3. OF CONNECTIVE TISSUE.

Scleroderma.

Sclerema neonatorum.

Morphœa.

Elephantiasis Arabum.

Rosacea: a. erythematosa; b. hypertrophica.

Frambæsia.

Class V.—Atrophies. 1. Of PIGMENT

Leucoderma.

Albinismus.

Vitiligo.

Canities. 2. OF HAIR.

Alopecia.

Alopecia areata. Alopecia furfuracea.

Atrophia pilorum propria.

3. Of NAIL.

4. OF CUTIS. Atrophia senilis.

Atrophia maculosa et striata.

Class VI.—New Growths.

1. OF CONNECTIVE TISSUE.

Keloid. Cicatrix.

Fibroma.

Neuroma. Xanthoma.

2. Of Vessels.

Angioma.

Angioma pigmentosum et atrophi-

Angioma cavernosum. Lymphangioma.

3. OF GRANULATION TISSUE.

Rhino-scleroma.

Lupus erythematosus.

Lupus vulgaris. Scrofuloderma.

Syphiloderma: a. erythematosum; b. papulosum; c. pustulosum; d. tuberculosum; e. gummatosum.

Lepra: a. tuberosa; b. maculosa; c. anæsthetica.

Carcinoma. Sarcoma.

Class VII.—Ulcers. Class VIII.—Neuroses.

Hyperæsthesia: a. pruritus; b. dermatalgia.
Anæsthesia.

Class IX.—Parasitic Affections.

1. VEGETABLE.

Tinea favosa.

Tinea trichophytina: a. circinata; b. tonsurans; c. sycosis.

Tinea versicolor.

2. Animal.

Scabies.

Pediculosis capillitii. Pediculosis corporis. Pediculosis pubis.

Salicylic Acid as a Prophylactic against Scarlatina, Measles, Diphtheria, &c.-Dr. P. C. Barker has, for more than five years, used salicylic acid as a prophylactic against the above diseases, and with very gratifying results, excepting in two instances, in the first of which the salicylate of soda was ordered instead of the acid, while, in the second, the acid was taken very irregularly. He has never had a second case of either scarlatina or measles in the same house, or among those known to have been exposed to infection, since beginning his experiments with this remedy. Some of the examples he quotes seem to show very strikingly the protective power of this agent. Children are stated to have lived and played in the same room—sometimes to have slept in the same bed with the patient after the disease had unequivocally declared itself, and yet to have escaped entirely while taking salicylic acid. Dr. B. gives it in doses of one to five grains (according to the age of the person under treatment) once or twice daily, the single daily dose being sufficient when treatment is begun soon after known exposure to infec-This is continued as long as circumstances demand it, e. g., where one of the same family is the invalid, it is kept up till convalescence is established and the house has been fumigated. Dr. B. also uses salicylic acid in diphtheria and typhoid fever to prevent the self-poisoning which so many cases, of the former especially, are apt to present. diphtheria he orders a strong preparation, a solution of zi in zii of alcohol, to which zvi of hot glycerine or water are added; this is dropped on the dorsum of the tongue at halfhour intervals in severe cases. By this means he succeeds in abolishing feetor, and has repeatedly noticed an improvement in the appearance of the throat soon after commencing its use. In typhoid fever he administers two to five grains every six hours, in capsule, as long as the exacerbation lasts.—New York Med. Journal. February, 1879.

Tincture of Myrrh in Hooping-Cough.—This forms the subject of an interesting paper by Dr. Campardon in the Bull. Générale de Therap., 15th September, 1878. Thirteen illustrative cases, selected from a much larger number, are related, and in these the treatment seems to have been markedly successful. The ages of the patients varied from two to fiftythree years, and all presented the characteristic paroxysmal cough. Tincture of myrrh, in doses of 3-15 drops every hour or two hours, in a small quantity of cinchona wine, was administered, with the result of cutting short the disease in three to eight days—that is, the spasmodic element was completely eliminated from the cough, and in those in whom this constituted the whole of the disease recovery was complete within the time stated; catarrhal affections of the respiratory organs, however, had to be combatted in the usual way. Dr. C. concludes that hooping-cough yields easily and rapidly to the administration of tincture of myrrh, in vin de quinquina as a vehicle; the latter is by no means essential, but it certainly aids the action of the former. This treatment is not incompatible with the simultaneous adoption, when necessary, of such measures as are appropriate to the relief of the tracheobronchitis or pulmonary congestion so often seen in this affection.

Trichinæ in American Pork.—Our Health Authorities, in view of the recent immense development of the trade in American produce, should be interested in the following note, which appears in the Detroit Lancet, Feb., 1879 :- "Some competent microscopists have been examining specimens of pork, taken at random from the several packing houses at Chicago. Of the specimens from one hundred different hogs, eight contained triching. The number of triching varied from thirtyfive to thirteen thousand to the cubic inch of muscle. disease seems to have increased in hogs during the last ten years, as at that time the Academy of Sciences at Chicago made similar examinations of pork, and found only two per cent affected. At present it may be said that eight per cent of the pork packed at Chicago is infected more or less with trichine. Observations go to show that a moderate number of these parasites produce no appreciable disturbance in either animals or man."

Post Partum Hæmorrhage treated by the Injection of Hot Water into the Uterus.—In the Dublin Journal of Medical Science for March, Mr. W. H. Holms narrates three cases where he was led to adopt this practice, and in every

instance successfully. He was induced to make trial of this treatment from the success it met with in Dr. Atthill's hands, and from the still earlier testimony of Dr. Whitwell, of San Francisco, who, in 1874, saw the uterus contract firmly and instantaneously, upon being washed out with hot water, after an operation, by Dr. Marion Sims, upon a sarcomatous growth of the fundus uteri. Mr. Holms tried it first in a woman who had been confined, two hours previous to his arrival, of her sixth child, and who had lost a large quantity of blood. "The patient was quite cold, insensible to outward impressions, and I could scarcely feel the flicker of a pulse at the wrist. The bed and bed clothes were saturated with blood, a pool of blood lay on the floor, and a thin stream slowly trickled from the uterus. On applying the hand over the uterus, that organ felt large and spongy. Having removed a quantity of clots from the uterus, and introduced the tube nearly to the fundus, I slowly injected hot water to the amount of about three pints, until it returned nearly colourless. The uterus contracted firmly, all bleeding ceased at once." The patient almost immediately showed signs of returning consciousness, and ultimately made a good recovery. The same treatment was adopted in other two cases of a similar kind, and with as satisfactory a result.

Ogston's Operation for Genu Valgum.—C. Thiersch, who has already performed a series of these operations, operated on a girl of 16 years, who died six weeks afterwards, from acute uræmia, both kidneys being in an extremely contracted state. He thus had the opportunity of investigating anatomically the results of the operation. The points of greatest interest were that the fragments were in close apposition: that the re-entrant angle, formed superiorly by the pushing up of the internal condyle, was filled up partly by osseous tissue supplied by the periosteum, and partly by connective tissue derived from the sawn surface of the condyle. The line of the epiphysis, markedly rachitic, was intact. Had the saw-cut, according to intention, been made less obliquely, and had the epiphysial cartilage possessed only its usual strength, the epiphysial line must certainly have been broken. That such a fracture of an undeveloped bone at the site of its longitudinal growth would have operated disadvantageously there can be no doubt. joint was thereafter opened and the patella turned down. The line of separation of the fragments was from 3 to 4 Mm. wide. This gap was filled up in the fresh preparations by a delicate red tissue or organized blood clot.—Centralb. f. Chirurg. No. 6. 1879.—D. N. K.

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GLASGOW MEDICAL JOURNAL.

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ORIGINAL ARTICLES.

A PECULIAR CARDIAC MURMUR.

By D. C. M'VAIL, M.B.

(Read in the Medico-Chirurgical Society, 24th January, 1879).

On the 20th of August last, S. W., 32 years of age, was admitted to the Western Infirmary. He looked tolerably healthy and well nourished, and stated that he felt no uneasiness or inconvenience if lying in bed or going about at his ease, but that very slight exertion brought on palpitation and breathlessness, with severe pain in the left side of the chest, occasionally shooting across to the right shoulder. The apex beat was in the fifth intercostal space, about half an inch inside the vertical line of the nipple. There was slight pulsation in the epigastrium.

The heart was acting most irregularly, both as regards time and force; this is shown by the accompanying sphygmographic tracing.



At the apex the first sound was completely lost in a blowing murmur. This murmur was heard all over the cardiac area, but with diminishing intensity as the apex was receded from.

No. 5.

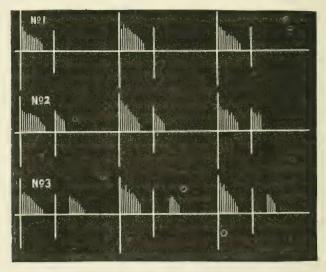
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Repeated examination left no doubt that this murmur was due to a considerable mitral regurgitation from incompetent

closure of the orifice during the ventricular systole.

At the apex the second sound was occasionally unaccompanied by any murmur, but more frequently it was succeeded by a murmur, which sometimes followed it so closely as to seem to be a part of it, while at other times there was quite a distinct interval between the conclusion of the sound and the beginning of the murmur. These three conditions may be represented thus—



In 1 the first sound is shown completely merged in a bruit, the second sound being normal; in 2 a murmur follows the second sound immediately; in 3 it follows it after a certain interval. The murmur following the second sound was quite inaudible at the base of the heart, and over the aortic and pulmonary cartilages, and during the whole time he was under observation it continued to be absolutely inaudible there. The three conditions of murmur shown in the diagram were constantly alternating with one another in an irregular manner, sometimes one and sometimes another of them predominating. On the 22nd of August, the second form occurred oftenest; on the following day the third form was the most frequent.

In the course of three or four weeks, with rest in bed and treatment by digitalis, the murmur following the second sound

became less and less marked; the heart's action, coincidently with this, becoming more regular, while the breathlessness and pain on exertion also in great part disappeared.

The very extraordinary murmur that followed the second sound could not have been produced at the aortic or pulmonary valves, as there it was perfectly inaudible. It could not have been auriculo-systolic, as it terminated long before the commencement of the first sound, or rather of the bruit that took the place of the first sound, and it had nothing of the thrill that usually characterises auriculo-systolic murmurs. It was, I believe, ventriculo-systolic, being produced by an abortive contraction of the ventricle, occurring either immediately on the closure of the aortic valves, or at a very short interval thereafter. This feeble contraction was not able to force open the aortic valves, but was sufficient to drive the whole or a portion of the small quantity of blood, that had entered from the auricle so soon as the diastole began, back again into the auricle through the incompetently closed mitral orifice.

Hales showed that the aortic valves are held closed by a weight equal to a column of blood 80 inches in height, and that before a single drop of blood can get from the ventricle into the aorta this weight has to be lifted by the muscular contraction of the ventricular walls. But in the case under consideration, the ventricle is in permanent connection with the pulmonary veins, owing to the imperfect condition of the mitral valve; and, in the pulmonary veins, experiment shows that the blood pressure is only one-third of what obtains in the aorta. Thus, in the case of this patient, a force of only a third of an ordinary ventricular contraction will send blood back into the pulmonary system, and, in its backward journey, it is thrown into vibration by the incompetent irregular mitral orifice.

The sphygmographic tracing shows that the ventricle is acting with every degree of irregularity, both as regards time and force. The heart appears to be so very irritable that it frequently does not wait for its full charge of blood, but every now and then, with only a partial charge, it contracts, producing those smaller pulsations of the tracing. But necessarily, even to cause the smallest of these, the force of the contraction has been sufficient to burst open the aortic valves, and, in doing so, to lift the pressure column of Hales.

But I believe the murmur under consideration is caused by contractions that are more feeble than the feeblest of those shown by the sphygmograph, by contractions occurring immediately on the entry of blood from the auricle; the force of the contraction, and the smallness in quantity of blood acted on, being insufficient to lift the aortic valves with the 80 inches of pressure on them, but yet quite able to overcome the pulmonary pressure, and give rise to the murmur in passing the rough auriculo-ventricular orifice.

Sometimes this abortive effort occurs sooner, sometimes later, and occasionally not at all, and thus are produced with irregular alternation the three conditions of murmur indicated in

the diagram.

(For discussion on this paper see Report of Medico-Chirurgical Society.)

ON THE ARRESTMENT OF BLEEDING FROM INTERNAL ORGANS.

By JOHN DOUGALL, M.D.

Lecturer on Materia Medica, Glasgow Royal Infirmary School of Medicine.

THE substances which, on theoretical grounds, may be used for arresting internal bleeding are rather numerous, and have also a wide and varied therapeutic range. By considering their individual physiological effects, the prescriber may select and combine, with both therapeutic and chemical compatibility, many preparations of single substances, of very diverse actions, so as to suit them to the complaint in question. Bleeding may take place in the brain, lungs, stomach, bowels, kidneys, bladder, or uterus, and though in every case the same thing has happened—one or more blood-vessels ruptured, and the same object is aimed at, stoppage of the bleeding-yet I think it can be shown that, instead of treating the different hæmorrhages by one class of bodies, as is frequently done, diverse remedies and combinations, as already said, may be used with increased advantage, independent of the part from which the blood proceeds.

The substances usually employed in such cases—chiefly astringents—are gallic, tannic, and sulphuric acids, tincture of the perchloride and sulphate of iron, alum, acetate of lead,

ergot, turpentine, creasote, and ice.

It is unnecessary to discuss the various theories of the causes of bleeding from the different organs, or to notice the usual classifications of hæmorrhages into passive, sympathetic,

&c., but I shall briefly refer to the efforts which nature makes to prevent a fatal escape of blood, as seen in surgical cases. For as the physician cannot arrest internal bleeding with the speed and sureness by which the surgeon applies acupressure, torsion, or the ligature, he should study nature's ways of doing so on external surfaces, so that he may assist her efforts by suitable means, when the hæmorrhage is internal.

These efforts of nature to stop bleeding consist of:—

1st. Certain alterations set up, in, and around the bleeding vessel.

2nd. Slowing the heart's action, hence lowering the blood

pressure.

3rd. Certain changes in the nature of the effused blood. 1st. As regards the alterations set up, in and around the bleeding vessel. When an artery is cut it retracts within its sheath, and the blood flowing over the roughened surface of the sheath congeals among its torn fibres. This, the External Coagulum, though lying within the sheath, is yet outside the artery, and tends to stop the hæmorrhage by blocking up the artery, and pressing the vessel in its sheath. Simultaneous with these changes there is contraction of the artery, and, subsequently, the formation of a blood-clot within the vesselthe Internal Coagulum. This, however, only forms after the bleeding has stopped, and acts at first as a breakwater by diminishing the force of the impingment of the blood-wave against the end of the artery. Inflammation is then set up in the vessel and adjacent parts, with effusion of lymph, by which the vessel goes on contracting and embracing the Internal Coagulum, till, latterly, it is transformed, up to its first collateral branch, into a solid fibro-cellular cord.

2nd. Slowing of the heart's action, and hence lowering of the blood pressure. In this way, also, nature tries to avert the result of her own act. If the bleeding be at all great, the heart's impulse gets weakened, the patient faintish, and hence he assumes the horizontal posture, either suddenly from syncope, or voluntarily. By this means the force of the waves of blood, shot into the arteries by the systoles of the ventricles, is diminished, and the clot, which tends to form at the bleeding orifice, is allowed to solidify, and so to stop the hemorrhage.

3rd. As regards the alterations in the nature of the effused blood. This consists in a tendency which blood has, while flowing, to become thick and viscid round the opening of exit, thus forming a mechanical obstacle to the bleeding, and thereby assisting in stopping it.

In these three ways, by which nature arrests hæmorrhage,

we see a striking and exhaustive combination of means admirably suited to the end in view. Hence, the physician, in such cases, should use remedies and adjuvants known to induce and favour such conditions—viz.:

1st. Those that contract the vessels. 2nd. That lower the blood pressure. 3rd. That thicken the blood.

1st. Of agents that contract the vessels, cold and ergot are chief. The effects of cold in this respect are well known, and are seen at their maximum by the use of ether spray, and in frost-bite. These agents contract the vessels so firmly that every blood corpuscle is squeezed out of them, the skin becoming of a waxen hue. Cold, however, as ice, or otherwise, has a limited sphere of application in the arrestment of internal hemorrhage, as its full effects are only produced by actual contact with the affected part, which is obviously impossible in the majority of such cases.

The action of ergot in health and disease, on man and the lower animals, has been carefully studied, in all its phases, by many distinguished British and Continental experimenters. There is one point on which they all agree—viz., that ergot given to a healthy person in moderate doses, in any of its preparations, acts on unstriped muscular fibre, so as to cause general vaso-motor tonic spasm. It is manifest, however, that under such a condition—viz., diminution of the calibre of all the vessels, there must be, and it has been found there is, rise of blood pressure, seeing that this fluid is, for the time being, spasmodically embraced in all its ramifications by the vascular tunics. Now, in lesions of larger vessels this condition must somewhat repress the tendency which their contraction has to stop bleeding, especially if the diminution in the calibre of the vessels is much greater than the bulk of blood lost, an unavoidable condition if general vascular contraction is to assist in arresting hæmorrhage. Hence, in such cases, general vascular contraction and rise of blood pressure are inevitable concomitants, the one implies the other, they are mutually related as cause and effect, and although ergot, besides contracting the vessels, also slightly lessens the force and frequency of the pulse, yet it does not do this sufficiently to avert the evil results of the excessive vascular tension which it may cause. Therefore, in order fully to utilize the hæmostatic action of this drug, it should be given with a medicine which produces a simultaneous decided lowering of the blood pressure, and this leads to the consideration of the next point—viz.:

2nd. The means by which the blood pressure may be reduced.

When the loss of blood is at all excessive, this, of itself, by lessening the quantity of fluid in the vessels, must, obviously, lower the pressure therein, seeing that though the mass of blood is diminished, the areas of the tubes are the same. By such means, also, the force of the heart's impulse is weakened commensurately with the smaller quantity of blood it has to propel through the system. Hence, in certain cases of internal hæmorrhage, especially cerebral, in a sthenic patient, bloodletting should be had recourse to with the above object, than which, as is well known, there is no surer means of lowering the heart's impulse. The blood pressure is also reduced by placing the body horizontally, (though in apoplexy the head should be kept raised); the cardiac pulsations are thereby reduced in strength and number, while the inspirations are shallower and fewer. This arises both from the body being at rest, and also because less power is needed, cateris paribus, to propel a fluid through horizontal, than vertical tubes.

Of medicines that lessen the beats and force of the heart, and which may be used for internal hamorrhage, the chief are veratrum viride, aconite, and antimony. Veratrum viride, though not much employed in this country, is used almost exclusively in America as a cardiac sedative. According to many American observers it also causes great nausea, vomiting, faintness, vertigo, and headache, but does not purge. It may, however, be made to lower the blood pressure without causing these effects, and the vomiting can also be prevented by giving corresponding doses of laudanum (5 to 10 drops) shortly before each dose of the veratrum viride. Dr. Cutter, of Massachusetts, U.S., compares as follows the effects caused by veratrum viride with those of venesection, digitalis, tartar emetic, colchicum, aconite, and veratrum album:—"Venesection diminishes the fulness, force, and frequency of the pulse; has a sedative influence on the nervous system; directly withdraws a portion of the solid constituents of the life-current, which, at least, it takes time to make up. Venesection cannot be persisted in without great hazard of prolonging the convalescence of the patient, if not weakening him for life. Veratrum viride diminishes the fulness, force, and frequency of the pulse; has a sedative influence on the nervous system, but does not reduce the nutritive quality of the vital fluid, which is the objectionable, if not injurious, feature of depletion. Veratrum viride can be employed for an indefinite period with safety, and stopped, its effects speedily subside. Of course, in every case veratrum viride cannot entirely supersede the lancet, but in the vast majority of cases as met with in the Middlesex East

Hospital, Massachusetts, it will. Even then it is an excellent thing for maintaining the impression gained by the primary depletion. Digitalis is slow, uncertain, cumulative; eminently a diuretic. Veratrum viride is prompt, sure, and not cumulative, as far as it has been possible to ascertain by the Societies engaged in its study; less of a diuretic. Tartar emetic directly changes the character of the blood, alters the secretions, purges in full doses, and its effects are permanent, so to speak. Veratrum viride does not seem to change the character of the blood, alters to a less extent the secretions, rarely purges, and, suspended, its effects soon subside. Colchicum is not so certain, is more of a diuretic, purges in full doses, rarely vomits, and has been observed to increase the urine in quantity and specific gravity. Veratrum viride is more sure, less of a diuretic, vomits, and has been observed to increase the urine, lowering the specific gravity. Aconite is narcotic; veratrum viride is not, in the full physiological effects the mind is clear. Veratrum album is a drastic purgative, judging from our experience with the alkaloid which purports to come from veratrum album. Veratrum viride rarely purges."

Aconite, as is well known, reduces the force and frequency of the circulation. Moderate doses have been found to render the pulse feeble, and reduce its beats to 30 or 40 per minute, the respirations, also, becoming shallow and fewer. These effects are held as caused by the drug acting directly, either on the muscular structure of the heart, or on its ganglia, as they are produced on the frog's heart after it is removed from the body, while if the dose be toxic, the heart finally stops in

diastole.

Antimony, in the form of tartrate, may also be used to lessen the force and volume of the circulatory current. The nausea, and vomiting, apt to accompany its action, should be carefully guarded against, as, if vomiting occur, it tends to increase the bleeding, doing harm instead of good. Antimony, like aconite, seems to act directly, either on the heart muscle or on its ganglia, as it lessens the pulsations of the cut out frog's heart, and finally stops it in diastole. Tartarated antimony, though a metallic salt, does not coagulate albumen.

3rd. Agents which may be used to thicken the blood. The experiments of Hewson conclusively show that cold thickens the blood while in the vessels, but does not tend to coagulate it either in the body or out of it. He cut out a portion of the jugular vein of a dog with its contained blood, and after freezing it, thawed it, and found the blood still fluid, but it soon coagulated when poured into a cup. This

experiment shows that a degree of cold sufficient to freeze blood does not coagulate it. Besides thickening blood, cold, as already mentioned, is a strong contractor of the blood-vessels, and for this latter property I think it should alone be used in internal hæmorrhage, as there are bodies which thicken the blood far more than cold does, and are, besides, more easily used. At the same time this double action of cold should be kept in view, as in many cases it may prove a suitable

remedy.

As tannic acid coagulates albumen it may seem not easy to see how it can enter the blood; yet it does so, as it is excreted as gallic acid, but whether the change takes place in the stomach, bowels, or blood is unknown. On the other hand, it is far more difficult to see how gallic acid can arrest hæmorrhage, for the very reason that it does not coagulate albumen, and is, moreover, a very mild astringent. As a matter of fact, however, clinical experience recognizes both as internal hæmostatics. Previous writers on this subject seem not to have known that albumen coagula, formed by acids, and probably by all chemicals, become divided to an infinitesmal degree in excess of water, and in that of the albuminous fluids from which the coagula are formed, which usually consist largely of water. This I have verified by experiment with a considerable number of bodies which coagulate albumen; for, although the albuminous flakes, wisps, and granules, may at first be agglutinated in masses visible to the naked eye, as seen in a laboratory experiment, a condition in which they could not possibly enter the circulation, still, the fluid containing them can be rendered opalescent, to the faintest degree, by repeated additions of water, which so minutely subdivides them, that even under the microscope the fluid seems homogeneous. Hence, under ordinary circumstances, not only tannic acid, but probably all albumen coagulators, enter the circulation and thicken the blood serum to a degree commensurate with the dose, the amount of water in the blood, and the quantity of blood in the organism.

As tannic acid is changed into gallic, in the system, the question arises whether one of them causes greater hæmostasis than the other, or whether they are equal in this respect. Seeing that tannic acid not only coagulates albumen, but also gelatine and mucus, while gallic acid does none of these, I submit that it has a far stronger claim to be considered a hæmostatic than gallic acid. Indeed, from want of these coagulating powers, and from its mild styptic action, I fail to see, on theoretical grounds, how gallic acid has got its hæmo-

static reputation. It is said that M. Pelletier found that a mixture of a solution of gallic acid with one of gum precipitates albumen, though neither does so singly.* From this it has been inferred that as gum has the same composition as common sugar, and that as grape sugar, or a material having the same elements, is continually present in the blood, gallic acid may act along with this saccharine matter in the blood, and so acquire astringency. I find, however, that a mixture of gallic acid with gum, or with cane, or grape sugar, does not coagulate albumen, either when cold, or when warmed previous to adding the albumen; so that this hypothesis of the astringent effects of gallic acid is untenable. Moreover, it is difficult to find any reasonable explanation of its alleged hemostatic action.

The following substances, which coagulate albumen, may also be given to thicken the blood; nitric, and hydrochloric

acids, acetate of lead, creasote, and iron alum.

Albumen coagulators may be termed direct thickeners of the blood, but this fluid may also be increased in density by other means, and by other bodies. The means referred to are the avoidance of fluids, and fluid diet, and of foods which excite thirst. Some of the bodies indicated are diuretics; by these, much water may be taken from the blood, and its density thereby raised. Diaphoretics and purgatives also take water from the blood, but they are objectionable here, as the former relax the system and the latter disturb the rest.

Another point of importance is that all albuminous coagula, whether produced by heat or chemicals, are soluble in solutions of the alkalies. Hence, presuming any of the bodies named to have entered the circulation, then, unless it have been given in quantity sufficient to neutralize, or acidize, the alkaline blood, the albuminous floculi which it forms will not merely become minutely subdivided, but will be entirely dissolved. From this it follows that the substances referred to should be freely

administered to be effective.

The physiological actions of the compounds which they form in the blood should also be kept in view. Nitric acid will probably form nitrate of potash—a diuretic—thus it may further assist in thickening the blood, though it is said that this salt in large doses tends to liquify that fluid. Hydrochloric acid is probably excreted as chloride of sodium. As acetate of lead is decomposed by most acids and their salts, alkalies, and alkaline earths, also by vegetable astringents, it is difficult to say in what state it passes from the body.

The quantities of creasote, and iron alum, that can be taken

^{*} Turner's Chem., 7th Ed., p. 995.

are so small, that any compounds they may form in the system

are of little importance.

The undermentioned substances, commonly given in cases of hæmorrhage, are omitted here for the following reasons: sulphuric acid, because it does not coagulate albumen, unless when so strong that it would act as a caustic to the stomach; acetic acid, tincture, liquor of the perchloride, and sulphate of iron, because they do not coagulate albumen; alum, and phosphoric acid, because their coagulating powers are scarcely appreciable; turpentine, because, though generally believed to coagulate albumen, it only forms, what seems a saponaceous emulsion with it, which floats on the top of the mixture, while the fluid below remains highly albuminous.

Although these bodies have no hæmostatic effect as albumen coagulators, they have as astringents. When administered in proper quantity, they first act on the alimentary mucous membrane, and having entered the circulation, become diluted by the blood, and in some cases, to a certain extent, neutralized by its alkalies, the resulting compounds being comparatively harmless or inert; turpentine, as is well known, giving the urine the odour of violets. The free residue then increases the density of the fibrinous constituents, causing also contraction of the muscular coats of the arteries, and on its way out of the blood, acting on the terminal capillaries, gland ducts, and again on mucous membranes. Hence, astringents, by their double action, noticed above, cannot fail to assist in arresting hæmorrhage.

Though these bodies do not coagulate albumen, yet those that do are also astringents, but weaker than the former. In hemorrhage, the best course is to combine, where compatible, both classes, as then a threefold benefit is got—viz., thickening of the serum, and of the fibrinous materials of the blood, also

contraction of the arteries.

Some other means for arresting hæmorrhage comprise minor details in assisting the three primary objects of treatment alluded to. These are attention to the diet, regulation of the

bowels, careful ventilation of the patient's room, &c.

The part from which the blood comes also requires that the details of treatment be varied, but these variations will at once suggest themselves to the medical attendant. by his considering the structure, function, and vital importance of the affected organ, the proximate cause of the hæmorrhage, the concomitant symptoms, existing or impending complications, and probable sequelæ.

UTERINE PRESSURE AND THE LONG FORCEPS IN TEDIOUS LABOURS; REPORT OF A CASE OF UNUSUAL DIFFICULTY, IN WHICH THE FORMER SUCCEEDED AFTER THE LATTER HAD FAILED.

BY SAMUEL SLOAN, M.D.,

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PRESSURE applied over the uterus, either by the hands or by an abdominal bandage, is an appliance familiar to every one engaged in the practice of obstetrics. It was indeed known and adopted long before the forceps were thought of. But it is only of late years that it can be said to be receiving from writers on midwifery the attention which it merits. As a means of exciting uterine action, when this is deficient, it is perhaps generally appreciated; whilst its advantage in expelling the placenta will be questioned by no one. Not a few must also have been satisfied that, when the head is pressing on the perineum, and uterine action seems incapable of completing the labour, firm pressure over the fundus with the left

hand, suffices to complete the expulsion of the head.

In my own practice I have become so confident of its efficacy as a means of propulsion that I rarely now administer ergot till the child is born; for not only is it capable of taking the place of this powerful excitant of uterine action, but it is also more manageable and decidedly less dangerous. But it is not only when the head is on the perineum that labour may be completed by uterine pressure; for I have frequently "squeezed out" the fœtus when the head had been high up in the pelvic cavity; practically doing the whole of the labour myself, on account of the absence of capable uterine contractions. Of course, in such a case, the fœtus must be small or the pelvis capacious. In one case I was asked by the physician in attendance to bring my long forceps, as the head was at the brim, and labour had lasted fully twenty-four hours. had been given, but with no benefit; the pains continued weak and the patient was becoming exhausted. Before applying the forceps I thought this a good case in which to try uterine pressure. This was done with the left hand, the right being used to gauge the progress of the head and assist in completing the dilatation of the os, whilst the head was being pressed down on it. In less than half an hour the head was at the vulva; a few minutes more of compression sufficed to finish the labour.

But even with good expulsive pains, and where the forceps would otherwise be required on account of the large size of the head, the case may often be completed without calling in their aid, by properly applied pressure. In such circumstances I have several times delivered by this means. Dr. Barnes, however, who seems to be a firm believer in this method of treatment, thinks that here we must stop in the application of uterine pressure, for he adds (Obstetric Operations, p. 10) "it is needless to premise that the presentation must be normal." Now, in the case which I have to report, the presentation was, though cranial, an abnormal one; and yet, as we shall see,

uterine pressure was an efficient remedy.

The lady, whose case I am about to report, has an interesting obstetric history; and, as it bears on the present question, I shall briefly relate it. Her first confinement was in March, 1874. Labour lasted from Monday till Thursday; the presentation is said to have been "cross," and the child-a boy of medium size—was still born. Her second confinement was in August, 1875. Labour, in this case, lasted two days and one night; when she was delivered with the forceps after half an hour's "hard work" on the part of the accoucheur, who declared that he had worked with "all his might;" and who seemed to The child—a very large boy—was be utterly exhausted. still born. The operator acknowledged that the forceps had destroyed it, and intimated that it would never be possible for her to have a living child. The third confinement was in September, 1876. After having been sixteen hours in labour. she was delivered, by the forceps, of a living girl, who was "much smaller than the boys."

My first attendance on this lady was at her fourth confinement (11th November, 1878), and, as her baby had died about a year previously, and she was thus again childless, her husband and herself were looking forward to this confinement with great anxiety. Labour may be said to have commenced at six o'clock on the morning of the 11th. I was summoned about ten, and when I arrived I found the os nearly half dilated, the membranes unruptured, and the head occupying the brim. Finding, after an hour's waiting, that the pains were inert, I ruptured the membranes, and employed uterine pressure in the usual manner. Labour then went on satisfactorily till the os was about two-thirds dilated, the head being by this time in the cavity. Progress was, however, slow, and ergot was given, but no further advance was made during the two hours which followed. During my examinations I had ascertained the exact position of the head, which was this:- the anterior fontanelle was felt in front and to the left; the sagittal suture, lying just behind the pubis, ran obliquely backwards, and to the right; the part first touched by the finger on examination being behind this suture. The position of the head was thus peculiar, being, in fact, the third cranial position, but with the right parietal bone presenting instead of the left, on account of the obliquity of the head in the pelvis. rectify this position, as far as possible, I endeavoured to promote flexion of the head by pressure, during the pains, on its anterior portion, but in vain; and, as the anterior lip of the os was becoming cedematous, and I feared to sacrifice this child by delay, I proceeded to introduce the forceps at 2.10 p.m. These (Simpson's double curved), were applied in the usual manner, and with no material difficulty; the blades lying one on either side of the pelvis. On making traction I followed my accustomed plan of making no attempt at rotation; but so handled the forceps as to permit them to take their own course. I succeeded in slipping the swollen anterior lip of the os over the head while pulling with the forceps, yet little advance was made, though as much force was employed as I felt justified in using. Before long, however, I noticed that an attempt at rotation was being made by nature, for the forceps turned till the right blade reached the pubis; but there it remained, and yet, notwithstanding a continuance of the traction during the pains, after the forceps had been fifty minutes on the head, it was still substantially where it had been at the time they were first applied. I was now driven to the conclusion that the forceps were preventing what nature was desiring; and, if I had had a pair of straight forceps at hand, I should certainly have expected a good result with them. To wait on their arrival, however, would have caused at least half-an-hour's delay, and this I wished to avoid. To drag the head through the pelvis might have been the work of a few minutes, as I had still plenty of strength in reserve; with what result it would not have been difficult to guess, nor did I care to ascertain. Feeling persuaded, however, that, if only a sufficient amount of vis a tergo were present, nature would be able to complete the delivery, or at least to rotate the head, I removed the forceps, and then, placing my left hand on the fundus of the uterus, and passing my right arm under the right thigh of the patient, I clasped the fundus uteri in both hands, disposing the ulnar edge of each as far over on the posterior surface of the fundus as possible. Fortunately I secured a good hold. Then, fixing my breast against the side of the bed in such a position as to enable me to pull in the

axis of the pelvis, I drew on the uterine contents during the next pain with all the force I was capable of exerting, when, to my great satisfaction, I found that I had brought the head quite to the outlet. Less force sufficed to complete the delivery, the head passing out in the second position. I now discovered the cause of the lateral flexion of the head, for the right hand of the fœtus was found doubled up behind its right ear. The child—a very large boy—cried vigorously when born; and on examining the head for marks of the forceps, no injury could be found beyond a slight abrasion of the cuticle behind the left ear. The child did well; and, with the exception of a mild attack of tonsillitis on the tenth day, the mother made an

excellent recovery.

Now, I admit that it is frequently an extremely difficult question to settle how far we succeed in helping nature in difficult labours; and it is probable that we often interfere at the very time when the natural powers are about to terminate the labour in a satisfactory manner. This fact, however, must not deter us from stepping forward when assistance is presumably required; and, should our efforts be crowned with complete success in the case of both mother and child, we have then a very strong argument for the wisdom of the course we have adopted. Now, what have we to guide us in this matter and to warrant our interference? First, an unfavourable previous obstetric history is an important item; second, the absence of progress for several hours, notwithstanding normal uterine action; third, the fact of the labour being sufficiently advanced to render operative interference presumably safe; and to these we may add as a fourth, a faulty position of the presenting part. Now, these conditions were all present in the case related, and, under such circumstances, it is surely unwise to wait till exhaustion of the mother or danger to the child is imminent.

There having been then sufficient grounds for helping the natural efforts, What shape ought the assistance to have taken? This is often a difficult problem, but here the choice clearly lay between turning and the forceps. Owing to the position of the head—in the cavity—and from the fact that the membranes had been ruptured several hours before, the former was obviously the less likely of the two to terminate the labour safely. And, further, the fact that one child, though a small one, had been born alive by the aid of the forceps, held out the hope that the same instrument might be of service here. Having determined then on the forceps, What instrument ought we to adopt? Nearly every recent writer on midwifery

advises that, in all cases, the long double curved forceps ought to be used. Now, Dr. Barnes fixes "over thirty minutes or even an hour" as the time when, if still unsuccessful, the forceps may be removed as unsuitable; and since in this case they had been applied to the head for a period of fifty minutes, and with sufficient force to remove the cuticle from a portion of the surface on which they were fixed, it will readily be admitted that if, in this dilemma, uterine pressure was capable of extricating the mother and child from a position of danger, and the physician from one of great anxiety, this method of treatment is worthy of occupying a higher position, as a means of terminating tedious labours, than has been hitherto

supposed.

Though I do not claim for uterine pressure an absolute force equal to that of the forceps (for here it was probably the fact that by it the head was free to pass through the cavity of the pelvis in the way that best suited its awkward position), yet an amount of power which will more than equal that expended by nature in ordinary cases may, I believe, be secured by this procedure. It is difficult to calculate exactly the amount of the force exerted in natural parturition, but Dr. Matthews Duncan estimates 6 lbs. as probably sufficient for the easiest of labours; whilst "the great majority of labours are completed by a propelling force not exceeding 40 lbs.;" and he reckons "the maximum expulsive power of labour (including the uterine contractions with the assistant expulsive efforts) as not exceeding 80 lbs." Now, let any one try, on one of Salter's spring balances, how much power he is capable of exerting by pulling with the breast fixed in the manner previously described, and he will find that he is able to exert a force of considerably over 100 lbs.; and that, without much difficulty, he can prolong this traction during the time occupied by a uterine contraction. And, although, in attempting to deliver by this means, a large portion of this power must be dissipated by friction, and by pressure on parts around the fundus uteri, especially where this structure is protected by intervening fat, or is not sufficiently prominent to be advantageously grasped, there is still left a large amount of force which may stand us in good stead in times of difficulty and danger.

The usual method of applying this treatment is to sit by the woman's side, and, laying both hands spread out over the fundus and sides of the uterus, to push downwards and backwards during the pains. Another method is to apply simply the left hand over the uterus and then to pull in the proper direction, whilst the right hand is free for examination. A

bandage applied round the abdomen, and pulling downwards and backwards is alike convenient by leaving the right hand free. In extreme cases, however, I would strongly advocate the method which was so successful in the case which I have reported; and I am convinced, from further trial of it, that it will not only give powerful aid, but that, by this means, the pressure can be kept under more control, and can be carried out with as much safety as by any other method which has been proposed.

Into the question of single or double curved forceps in occipito-posterior positions I shall not enter; but, though I am not prepared to admit, with Dr. Leishman, that rotation "can only be effected by the straight instrument," I look on this case as a step towards the solution of this important question.

THE PERCENTAGE REGISTRATION OF THE SENSITIVENESS OF THE CONDUCTIVE APPARATUS OF THE EAR TO RESONANT IMPULSES OF MINIMUM INTENSITY.

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(Read in the Medico-Chirurgical Society, 24th January, 1879).

DEAFNESS occurs (1), when the transmission of resonant impulses by the several parts of the conductive apparatus of the ear is prevented or impeded; (2), when the resonant impulses, being transmitted, fail to excite a sensation of sound, or its perception, from defects in the nervous apparatus. In the examination of a case in which more or less deafness is the prominent symptom, the first object must therefore be to determine to what extent, if any, the conductive portion of the auditory apparatus is responsible for the existing deafness.

The sensitiveness of the conductive apparatus, in virtue of which that apparatus is influenced by, and transmits resonant impulses of low intensity, is strictly proportional to the inertia of the mass of the apparatus; so that, if the inertia be increased by changes which have taken place in and around the conductive apparatus, the consequent loss of sensitiveness will be indicated by the proportionate rise in the intensity required. Hence, by means of the minimum intensity of sound required

to overcome the inertia, the sensitiveness of the conductive apparatus may be ascertained, and the amount of any loss thereof determined by comparing the minimum intensity found to be necessary, with that required when the sensitiveness is normal. Since the intensity of sound varies, according to the well known physical law, inversely as the square of the distance from the sonorous body, the maximum distance at which a sound affects the conductive apparatus necessarily depends on the intensity being, at that distance, the minimum capable of overcoming the inertia; consequently, distance, by reason of the intensity which it represents, may be employed, like the intensity itself, to determine the sensitiveness, and is, indeed, the method in actual use for this purpose.* maximum distance for a given sound, when the sensitiveness of the conductive apparatus is unimpaired, is termed the normal distance; while, for the sake of distinction, the maximum distance in the case of a patient, may be termed the patient's distance. As the object of the investigation is to ascertain the relation of the sensitiveness of the conductive apparatus of the patient to the normal, it is immaterial whether the numbers employed to demonstrate this denote distance or intensity.

The investigation of the sensitiveness of the conductive apparatus is best carried out by periodic impulses of sound, which are valuable for this purpose by reason of their intensity alone, pitch and quality of sound being here of no importance. Hitherto, the chief objection to the use of the tick of a watch the sound usually employed—has been the fact that hardly two watches emit, at the same distance, sounds of equal intensity; so that, even when similar results are obtained by several observers, the present method of registration prevents this relation among the results from being recognized—a state of matters exactly paralleled by the confusion which would attend the use of thermometers, each graduated to a scale of its own. The objection is, however, easily overcome by the usual method for the correction of inaccuracies in scientific instruments, by which absolutely uniform results are obtained from a series of instruments, no one of which is in itself accurate. A real or assumed standard for comparison is, of course, essential; in the present instance, an assumed standard distance will be employed for the correction of the distances obtained by the use of any watch-sound, and, as already explained, may be virtually regarded as a numerical expression of the standard

^{*} The closest analogy exists between this method and the use of Snellen's types in the examination of the optical part of the organ of sight.

(i.e., the normal) sensitiveness. Any distance may be arbitrarily assumed as the standard, and will give good results, but no number has seemed to me so thoroughly fitted for this purpose as 100, because it enables the percentage system of expressing results to be made use of, the advantages of which are now so well known, and so thoroughly appreciated. The normal sensitiveness of the conductive apparatus, which is the real standard, I propose, therefore, to represent by the equivalent, 100 per cent, and variations from the normal, by corresponding

percentage equivalents.

In the practical application of this system, it is first necessary to find the normal distance for the sound of the watch to be employed. With the assistance of a few friends, whose ears are normally sensitive to sound, the normal distance is readily determined by measuring the distance from the ear to that point beyond which no sensation of sound can be excited. The circumstances under which the normal distance is determined, must be approximated as closely as possible to those under which it will most frequently be used. If the patient's distance is usually found during the day, amid the noise of the city, the normal distance must be determined under similar surroundings. Having found the normal distance, the next step is to find the patient's distance, which is determined in a precisely similar manner to the normal distance.

From these two data—the normal and the patient's distance—the percentage equivalent for the sensitiveness represented by the latter can be calculated. When the observations are only occasional, nothing more than a sum in simple proportion is required; for example, let the normal distance for the sound of a watch be 56 inches, and let the patient's distance, determined with the same watch sound, be 24 inches, required the percentage equivalent for the sensitiveness represented thereby.

As 56 : 24 : : 100 : x

where x = 42.85. The sensitiveness of the conductive apparatus to resonant impulses would, therefore, be represented in

this case as 42.85 per cent, and the loss 57.15 per cent.

When numerous observations are regularly taken, it is more convenient to construct a table for every watch used, showing, at a glance, the percentage equivalent corresponding to the patient's distance. In the proportional statement above, the first and third terms are constants, for that particular watch-sound, so that if the third term be divided by the first, the quotient, multiplied by the variable second term, yields precisely the same result as in the ordinary proportional method

above. This coefficient when applied to the distances obtained by the use of a watch-sound, becomes the coefficient of correction for all distances possible with that sound, because by means of it, the results are corrected for the assumed standard distance. The construction of those tables is facilitated, therefore, by employing in the calculation the coefficient of correction instead of the ordinary proportional method. The rules may be summarised as follows:-

- (1.) The quotient obtained from the division of the standard distance (100 inches) by the normal distance is the coefficient of correction.
- (2.) The product of the multiplication of the coefficient of correction and the patient's distance is the corresponding percentage equivalent.

Thus, in the example previously employed, if 100 be divided by 56, the quotient, 1.7857, becomes the coefficient of correction for all distances obtained by the use of that watch-sound, and if this number be multiplied by 24, the patient's distance given, the result is 42.85 per cent as before.

In proceeding to construct a table of percentage equivalents for the distances obtained by the use of a watch-sound, the number of inches attainable is set down in sequence in one column of the table, and, in another column, opposite each number in the first, the corresponding percentage equivalent.

As a considerable number of calculations are required in constructing these tables, the liability to error is much diminished, and the arithmetical work lightened by the use of logarithms instead of simple numbers. The rules for the use of logarithms in these calculations are as follows:—

(1.) The difference between the logs. of the standard and the normal distances, is the log. of the coefficient of correction.

(2.) The sum of the logs, of the coefficient of correction and the patient's distance, is the log. of the corresponding percentage equivalent.

Using the same example as before, the full working-out by this method is as follows:-

Log. 100 (standard distance), Log. 56 (normal distance),	Garden Company	$2.0000 \\ 1.7482$
Log. of coefficient of correction, Log. 24 (patient's distance),	=	$\begin{array}{r} -2518 \\ 1.3802 \end{array}$
Log. of percentage equivalent,	_	1.6320

The antilogarithm of which is 42.85 per cent.

Once the coefficient of correction for any watch-sound, or its logarithm, is known, only the 2nd rule in each method is required. The following table is partially constructed in illustration of the foregoing description:—

WATCH, No. 1.

Normal distance,	==	56 inches.
Coefficient of correction,	===	1.7857 or
Log. of do. do.,	=	·2518.
	-	

Patient's Distance.	Percentage Equivalent
$\frac{1}{2}$	1.78
2	3.57
3	5.35
• • •	***
56	100.00

As soon as the patient's distance is determined, a reference to the table at once shows the corresponding percentage equivalent. The signs already in use to denote the fact that the sound is only audible on contact (+c), or not on contact (-c), on pressure (+p), or not on pressure (-p), may be employed in reporting cases, to supplement the table, noting at the same time the normal distance of the watch used,

thus $\frac{+p}{56}$

Now that the proposed system of registration, and method for obtaining uniform results from a series of ordinary watches has been fully explained, a comparison between it and the system of registration at present in use may be here conveniently introduced. For the purpose of rendering the contrast conspicuous, suppose that three separate observers examine, each with his own watch, the right ear of a patient, with a view to determine the sensitiveness of the conductive apparatus, and that their results when found, appear as follows, stated in inches:—

$$(1.) \ \frac{24}{56} \qquad (2.) \ \frac{261}{609} \qquad (3.) \ \frac{135}{315}$$

These fractions may be taken as examples of the present system of illustrating the relation of the sensitiveness of the conductive apparatus of the patient to that of the normal, the denominator of each fraction being the normal distance, and the numerator the patient's distance. If these results, instead of being considered finite, were regarded as readings obtained from inaccurate instruments, and therefore requiring correction

before being published, the principal objection to the fractional system, as a method of recording a scientific fact, would then Taking the three results reported above, and be removed. correcting them for the proposed standard, the following is the result :-

$$\frac{24}{56}$$

$$\frac{261}{609}$$
are each = 42.85 per cent.*
$$\frac{135}{315}$$

In conclusion, I have only a few words to say on the selection of the most suitable normal distances for the investigation of the different degrees of deafness, a subject of considerable practical importance. Undoubtedly, any sound, no matter what its normal distance is, may be used, but not equally well in all cases. As long as the patient's distance is infinitely small, relatively to the normal distance employed, a sound of long normal distance is better adapted for the investigation of the case than one of short normal distance, since the patient's

* The calculations by the various methods are appended for the last two examples, the first having been already given in full.

	(2.) (3.)	609 : 315 :		261 135		:	: : -		00	:	42:85 42:85
_	(2.) (3.)	100 100	*	609 315	=	0.16	642 1746	×	261 135	=	42·85 42·85
(2.) Log. 100 (standard distance), = Log. 609 (normal distance), =								2·0000 2·7846			
Log. of coefficient of correction, $=$ $\overline{1.2154}$ Log. 261 (patient's distance), $=$ 2.4166											
Log. of percentage equivalent, = 1.6320 the antilogarithm of which is 42.85 per cent.											
	(:			0 (stan 5 (nori					=	2.000	
				coeffic 5 (pati				n,	=	1·50 2·130	
the ar	ntiloga	Lo rithm		percer hich is				,	=	1.63	20

distance, although infinitely small in each case relatively to the normal distance, is, in the former, absolutely large enough -being seldom less than several inches—to render the determination comparatively easy. On the other hand, when the patient's distance is large, in relation to the normal distance employed, a sound of short normal distance is better adapted for the investigation of the case than one of long normal distance, since the patient's distance, being then confined within readily accessible limits, is rapidly and easily determined. In the progress of a case, when the relation of the patient's distance to the normal passes from the first into the second phase, the sound of long normal distance first employed should give place to that of short normal distance, for the reason assigned. In the investigation of cases of great deafness, therefore, a watch sound having a normal distance of about 50 feet should be employed, and one of about 5 feet, for moderate or slight deafness. As soon as the patient's distance reaches 10 feet with the first watch, its use should be discontinued in favour of the second, with which the examination is to be continued until the sensitiveness is normal. The substitution occasions no interruption in the percentage registration, $\frac{10}{50}$ and \frac{1}{5} being each equal to 20 per cent.

For general purposes a watch sound having a normal distance of about 20 feet will be found most suitable. The recently invented Hörmesser of Politzer may be admirably adapted for the investigation of cases of great deafness, but the extreme length of its normal distance (50 feet, less 7 inches), precludes its employment in other degrees of deafness. The watches used should be furnished with a "stop," by means of which the sound may be interrupted at pleasure, without the patient's knowledge; the same result, however, may be less perfectly attained, by reversing the hand which holds the watch, so that the hand is interposed between the watch and the ear of the

patient.

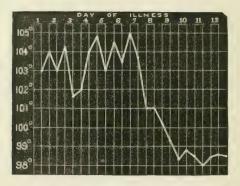
A CASE OF DIPHTHERIA IN WHICH THE PRIMARY LOCAL SIGNS WERE THOSE OF ACUTE PLEURISY.

BY FRANCIS HENDERSON, M.D., HELENSBURGH.

Mrs. X., aged 30, has a delicate constitution, and is of an excitable nervous temperament. She was nursing her first child when seized with the illness about to be described.

Three months had clapsed since her confinement, and although quite well, she had scarcely recovered her usual strength.

1st day of illness.—On the 11th of March, while sitting at dinner, Mrs. X. was suddenly seized with a severe pain in the left side. She had to leave the table and go to bed. On visiting her, two or three hours after, I could discover nothing abnormal at the situation of the pain, which was confined to a small area in the lower left axillary region. The pain had the character of a stitch. The patient was feverish—pulse 104—temperature 103°. The tongue was clean and not the least dry. The throat was examined (although no complaint was made of it), and nothing abnormal was observed. Dover's powder, with nitrate of potash, was given, and hot applications were applied to the side. On inquiry, it was ascertained that Mrs. X. had felt chilly in the morning of this day, and that on the previous day she had gone out of doors, contrary to custom, without her sealskin jacket. This was all that could be elicited in the way of causation.



2nd day.—Pain had not been relieved at all, and seemed rather worse. Two doses of 10 grains of Dover's powder had produced neither sleep nor soothing. The breathing was quick and shallow. There was no cough, and no physical signs of mischief in the chest. Temperature 104°—pulse 108—tongue moist and even watery. The urine was natural in appearance and quantity, but was not tested. In the course of this day, three subcutaneous injections of atropine, in increasing doses, were made at the seat of the pain, without any result. (It should here be noted that Mrs. X. was very difficult to affect by narcotics, of this I had satisfied myself during a previous illness.)

3rd day (morning).—Pain quite as much complained of—

breathing much caught—slight dulness on percussion over posterior portion of the lower axillary region—respiratory murmur weak, no friction or crepitation—tongue still moist. Urine abundant. Linimentum cantharidis was painted on over an area of about 4 inches square, and a solution of chlorate of potash in aqua. acetat. ammon., given at intervals.

(Evening).—Blister rose very well, and there seemed some relief to the pain and breathing, although the patient did not admit this. The temperature had fallen to below 102°—pulse 104. The patient has had no sickness all three days, and has taken milk and soup in fair quantity. Bowels have acted of

themselves.

4th day (morning).—Patient slept fairly well, but does not admit any abatement of pain. Dulness to percussion more decided—respiratory murmur weaker. Slight friction was heard about the lower edge of lung, this, however, was very transient, and not well marked. Salicine was begun in 12 grain doses every two hours, and a dessertspoonful of brandy was given every two hours alternately with the salicine. The pulse was weak, and the patient looked more exhausted.

(Evening).—Temperature had again risen to 104°—chest signs and other symptoms not greatly altered. Up to this time the aspect of the case that impressed me most was the severity of the general illness, and the very limited amount of local affection discoverable, and my opinion was that the local condition was a complication, and was not the cause of the general pyrexia. The abundant and clear urine was a significant feature, but its import was not then appreciated.

5th day (morning).—Patient had again a fair night as to sleep, and was taking nourishment, brandy, and medicine well—pain still as much complained of, but the nurse reports that during sleep the breathing appears very natural—patient had no cough or expectoration—dulness to percussion somewhat extended towards lower part of scapula—urine still clear, and of normal quantity, was examined, and found to contain albumen in considerable quantity, (after standing, the albumen formed about a quarter of the column of urine in the test tube)—specific gravity 1020. Hot poultices were applied over the back of chest, and also over the region of the kidneys.

At 6 o'clock p.m. Dr. Leishman came from Glasgow for consultation. He was previously acquainted with the patient. The dulness to percussion under scapula had become more decided, and in this situation tubular breathing could be heard. This was not heard at the seat of pain in the lower axillary region, but in both situations there was increased vocal reson-

ance, although this was most distinct below the scapula, where it amounted to bronchophony. The urine, at the time of Dr. Leishman's visit, showed only a cloud of albumen. We agreed that there was some congestion of the lung, and also a little pleurisy, and also that the local signs were apparently out of proportion to the degree of illness present. The pain (of the severity of which perhaps enough has not been said in the foregoing notes) was felt to be an important symptom. We were both anxious lest the case should prove one of those rapid and very fatal cases of congestion of the lung where overpowering pain is not an infrequent accompaniment. A further trial of the salicine, in the hope of bringing down the temperature was decided on, with the continuance and increase of stimulants, if a failing pulse indicated this necessity.

6th day (morning).—Patient had a good deal of sleep, but feels no better and seems weaker. Complains of pain also in front of chest under clavicle. Here the breathing was puerile. Posteriorly the physical signs are more decided. Tubular breathing and bronchophony more marked. Temperature 104°5—pulse 116. Tongue continues very moist and patient takes nourishment, chiefly milk and beef tea, very freely, but is very weak. Is quite fatigued when she is turned round upon her side by the nurse. The constant hot poultices on the back were exchanged for mustard and linseed occasionally applied, and the brandy was increased to one dessertspoonful every

hour.

(Evening).—A fall of one degree of temperature was noted. The urine was found to contain as much albumen as on the

morning of the 5th day.

7th day (morning).—Patient very low. Pulse 108; weaker. Chest signs rather improved. Temperature 105°. Urine contains a much smaller quantity of albumen; specific gravity 1015. This afternoon, for the first time, the patient complained of some discomfort in swallowing. On examination, the soft palate, uvula, and pillars of the fauces were pretty extensively covered with large patches of greyish-white false membrane. The membrane was very thin. It could not be brushed off. The palate and uvula were sponged occasionally with a solution of chlorate of potash. The pharnyx was quite free of membranous patches.

(Evening) 9:30 p.m.—Patient was extremely weak—the expression of face betokening much exhaustion. She seemed sinking. Brandy was increased to half an ounce every hour, and even more to be given if the nurse could get her to take it.

8th day (morning).—Rather less sunk. Eight ounces of

brandy had been given in the night. Pulse 106; not so weak. The temperature had fallen to 101°. Patient had a slight tickling cough, which seemed due to the irritation of the throat. There was no expectoration. Urine showed only a trace of

albumen, specific gravity 1010.

(Afternoon).—Dr. Leishman came down again. We agreed that the case was one of diphtheria, and that this was the cause of the illness from the first. On making inquiry as to a possible source of infection, nothing could be made out. The friends were warned of the risk to themselves specially entailed by kissing, and the means for isolation and disinfection were put in force.

The condition of the chest was improved. The prognosis was very unfavourable, but not hopeless. The opinion that diphtheria had been present from the beginning, and that therefore the patient had reached the eighth day of the disease, held out a hope that the poison might have nearly spent itself. Certain it was that the patient's strength was almost

exhausted.

(Evening).—Mrs. X. was not so much sunk as last night. She complained of pain in the bowels, had vomited more than once, and could not take much nourishment. Temperature 101°.

9th day (morning).—Had passed a tolerable night. Pulse 84. Still very weak. Temperature 100°·2. Chest symptoms improving. Urine free from albumen. Specific gravity 1020. Palate and uvula much less covered with diphtheritic patches. Patient has taken numerous weak turns, with deep sighing.

Brandy given very freely.

(Afternoon).—Dr. Leishman came down again to-day. He found all the symptoms better. The pulse was still weak. The patient was much revived at the time of his visit, and the contrast with her appearance on the previous day was great. All through this illness Mrs. X. occasionally revived wonderfully, and at other times was quite collapsed. This variability of apparent strength seems characteristic of diphtheria.

(Evening) 10 p.m.—Not so lively. Tongue sore, tending to rawness. Sloughs separating. Pulse 96—temperature 99 4.

10th day (morning).—Temperature normal. Pulse 80. Urine, specific gravity 1008—no albumen; quantity much above the normal. Sloughs almost entirely away, except at each side of uvula. Redness and swelling of mucous membrane of pharynx and tongue. Chest sounds improving.

(Evening).—Patient holding on well.

11th day (morning).—Slept very well through the night;

was wakened every hour for nourishment and half an ounce of brandy. If allowed to sleep any longer she awoke weak and exhausted. Friction over lower axillary region loud and rough. Dulness diminishing, and tubular breathing and vocal resonance under scapula less distinct.

(Evening.)—Has been very drowsy from weakness for some hours. Pulse 76—weak; temperature 98°. Soft palate and uvula almost clean. Urine free from albumen; sp. gr. 1010.

The remainder of my notes may be summarized to avoid tediousness. There was no return of pyrexia and no reappearance of exudation on the throat or palate, the mucous membranes of which continued for some time raw looking, although soreness was not much complained of. The chest rapidly improved, although on the 14th day some friction was still to be heard. A few days after its cessation, the natural respiratory murmur was nearly quite restored.

The urine did not again contain albumen, but it increased much in quantity and fell in specific gravity. On the 12th day it was almost twice the natural quantity, and had a specific gravity of 1003. On the 15th day the specific gravity was 1005. From that time until the present date (April 17th, the 38th day from the commencement of the illness) the

urine has been lessening in quantity and rising in specific gravity, although in a variable manner. It is now 1012.

As regards the general condition, after the 12th day the patient slowly gained in strength, but occasionally showed great weakness. Nourishment (of which she took a large quantity) had to be given at short intervals, and the brandy had to be continued at the rate of half an ounce every hour until the 15th or 16th day, after which it was slowly diminished. On the night of the 15th day, for example, she was allowed to have three hours of continuous sleep, and on being then roused she manifested great weakness from the want of support.

Mrs. X. is now (April 17th) able to be out of bed a few

hours, but is still suffering from nervous debility.

REMARKS.—In addition to remarks already made, I wish to

refer to a few points in this case.

First.—As regards the nature of the chest affection—I have now no doubt that it was chiefly, if not entirely, a pleuritic exudation resulting from (specific) inflammation of the diaphragmatic pleura, and confined by adhesions from reaching to the front of chest, or even far round into the axillary region. This exudation compressed the lung upwards, causing (by condensation of the pulmonary tissue) tubular breathing and

bronchophony. The increased vocal resonance, or fainter bronchophony, audible at the original seat of the pain, was either communicated by the chest walls, or more probably by fibrinous bands, tightly stretched between the visceral and parietal pleuræ, which would fulfil the acoustic requirements. This view agrees with what was observed during the period of resolution. Then, distinct pleuritic friction was heard for some days in the lower axillary region, extending, as absorption proceeded, backwards and also upwards towards the scapula. The extension of the friction in this direction occurred pari passu with diminished dulness and lessened tubular breathing and vocal resonance. Finally, the rapid and almost complete restoration of the respiratory murmur in a few days more, without any form of crepitation or expectoration, renders it nearly certain that the lung could not have been consolidated by exudation into the air-cells.

Second.—From the commencement of the illness the urine was normally abundant and of natural appearance, and it continued so. This condition, in a case of high pyrexia, was itself abnormal, and ought to have attracted more attention, particularly when, on the 5th day, the urine was tested and found to contain a considerable amount of albumen with a specific gravity of 1020. These facts, in the presumable absence of chronic kidney disease, were very suggestive, and I must admit some obtuseness in not appreciating their full value. They were regarded as evidence of congestion of the kidneys due to the general fever, but they ought further to

have suggested the specific poison at work.

I can recall more than one case of severe undefined fever, where the urine was notably increased in quantity and watery in appearance, and where there were ultimately good grounds for concluding that the undefined fever was diphtheria.

Third.—As regards the throat symptoms in our case. was stated that at the beginning of the illness the throat was examined with a negative result. It was not again inspected until the 7th day, when the patient complained of sore throat.

Judging from the appearance and extent of the false membranes, the probability is, that they had then been in existence for two or three days. Mrs. X. was extremely acute and observant, and even when she did direct attention to her throat, she complained of it very little indeed, and one could not help thinking that if the patient had been more sunk or less observant, the condition of the throat might easily have escaped discovery altogether, and the case might have remained obscure.

Fourth.—As to the treatment of this case. It consisted in keeping up the strength by nourishment, and specially by free stimulation. It is Dr. Leishman's opinion, in which I completely concur, that, without the liberal use of stimulants, the case would have ended unfavourably. I must also add that the patient owed much to the admirable nursing which was carried out by two nurses belonging to the Nurse's Training Institution, St. George's Road.

CURRENT TOPICS.

We issue in this number a list of the Subscribers to the Journal, who form the Glasgow and West of Scotland Medical Association. We regard this list as entirely satisfactory, the numbers exceeding those at any previous time on the membership of the Association. It will be seen from the list that there are at present 309 members. At this time last year there were 304. This last number is exactly that of the largest membership during the quarterly form of the Journal, as given in the list published in August 1872. These numbers, of course, do not include copies sold to booksellers, of which there is an increasing number.

There were some who regarded the enlargement of the Journal, and the consequent increase of subscription at the beginning of this year, as of very doubtful expediency, especially in view of the present severe commercial depression, which has been peculiarly felt in Glasgow and the West of Scotland. It is surely an augury of still greater advance that, in spite of this, the number of subscribers has even increased. A few former subscribers withdrew, but their numbers have been more than filled up by new members who have joined. It is our object to enlarge the Journal permanently to 96 pages, and this is to be done by the further addition of 50 or 100 to our list of subscribers. Judging from the past it ought to be accomplished in the course of the next year or two, and we would solicit the aid of present members in attaining this object. The Journal is in the way of attaining to a more satisfactory financial position, and it only needs, we believe, some further effort to make it a success in this very important respect.

COD LIVER OIL BISCUITS.—We have received a tin of biscuits in which cod liver oil is used in the manufacture, we presume instead of butter. A teaspoonful of the oil is contained in seven biscuits, which are of very small size. biscuits, which are made with the whole wheaten flour, are exceedingly palatable—more than palatable, indeed, as they are, perhaps, the most eatable biscuits we have ever tried. There is not the slightest taste of cod liver oil in them, although a friend informs us that, after eating them, his children smell of cod liver oil, just as after taking the oil by We do not presume to determine whether the baking of these biscuits interferes with the therapeutic properties of the oil, but we may say that we know of no form in which it may be given so agreeably as this. We believe that the biscuits are intended, to a great extent, for children, and the patentees (Messrs. M'Call & Stephen, Adelphi Biscuit Factory, Glasgow) have shown some wisdom in calling them "Nutrient Biscuits," which they certainly are in regard to both of their main constituents.

FUCHSINE IN ALBUMINURIA.—We learn that a number of medical men are employing fuchsine in cases of albuminuria, according to the method described in one of the Medical Items in our March number. We shall be glad to receive any notes as to the results.

REVIEWS.

Animal Chemistry; or, the Relation of Chemistry to Physiology and Pathology. A Manual for Medical Men and Scientific Chemists. By Charles Thomas Kingzett, F.C.S. London: Longmans, Green & Co.

Before stating our opinion of Mr. Kingzett's book, it may be advisable to give a summary of its contents, and to conclude with the preface, as is customary with authors themselves.

The work is divided into five parts, headed "General;" "Organs, fluids, and processes concerned in digestion, &c.;" "Nutrition, or work and waste;" "Other organs, tissues, and fluids of the body;" and "Chemical and philosophical sub-

jects." In the first chapter is given a resumé of the researches of Boerhave, Priestley, Galvani, Wöhler, and Liebig, in so far as they bear on the subject of animal chemistry. The second chapter treats of "the share of chemism (?) in life." Mr. Kingzett then proceeds in a sketchy way to give some account of some organic compounds and processes, which would convey little information to the non-chemist, while it is scarcely necessary to explain such matters to the chemist. These three chapters form the general considerations.

We now pass from the general to the "particular." The

subjects are taken up in the following order:—

Part II. Saliva, chordal, sympathetic, &c. Gastric juice, analysis, function, &c. Chyme and peptones, pepsin, abnormal constituents. Bile, pancreatic, intestinal, and splenic juices; fæces, chemistry of the bile. The liver and its constituents.

Part III. Chyle, lymph, and blood. Nutrition or alimentation. Respiration, breath, and muscle oxidation. Animal heat, vital force, and muscular action. The urine and its chemistry.

Sweat.

Part IV. The chemical constitution of the brain. Other animal organisms, tissues, and solids. Other fluids of animal origin.

Part V. Albuminous principles, including pepsin and peptones. Chemistry of animal carbohydrates. Of the fats and fatty acids in the human body. The Pettenkofer reaction. On fermentation, putrefaction, and the germ theory of disease; also antiseptics and disinfectants. The physiological action of chemical substances. Character.

It will be seen from this summary that Mr. Kingzett has undertaken no small amount of work in compiling his book.

In the chapter on saliva, there is a good resumé of the work which has been done on the subject. Some attention has lately been bestowed on the gases of saliva; to this no reference is made, although these probably have a large share in promoting the action of ptyalin as a ferment. In treating of gastric juice, Thudichum's view is supported—viz., that sodium chloride, and lactate, are split up in the walls of the stomach into free caustic soda, and hydrochloric and lactic acids. It may be asked, what should cause this decomposition? It cannot be ascribed to diffusion, for salt diffuses, as a whole, without decomposition. Maly's experiments on the dialysis of a mixture of lactic acid and a chloride, in which a lactate and free hydrochloric acid were produced, is said to be confirmatory of Thudichum's assertion. With this we can by no means agree. Diffusion of the constituents of a salt per se, and diffusion in presence of a powerful acid are two very different things.

In the space of a short review, it is quite impossible to consider critically many of the hypotheses approved of in this work; but we may remark that very great prominence is given to Dr. Thudichum's researches, conclusions, and inferences. A criticism would therefore, to a large extent, amount to an examination of Thudichum's published papers. This we have no intention of doing, but would merely point out the prophetic ingenuity of that author in ascribing formulæ to substances obtained by him from bile and brain, often possessing a black or brown colour, amorphous, tarry, and exhibiting no definite reactions. We venture to doubt if many of these substances exist as such, except in the brains of Dr. Thudichum and Mr.

Kingzett.

Let us choose one subject, for example, blood, and see what information we should derive from Mr. Kingzett's account of it. In the first place, about a dozen lines are devoted to its absorption spectrum, in which the reduction of the arterial blood by reducing agents, such as ammonium sulphide, &c., causing it to show a single band, is altogether omitted. Under the respective headings "hæmatocrystalline," "hæmoglobine," &c., no notice is taken of the absorption spectra of these bodies, although they are characteristic tests for the presence of these constituents of blood. We are next informed of the interchange of gases during respiration. We look in vain for any information concerning the amount of gases in blood, or of the methods of estimating them, with exception of one process which shall be considered in its place. Mr. Kingzett says next, "The carbonic acid is absorbed by the blood, and is contained therein partly in the state in which it exists in soda water, and partly also in combination with alkaline bases, particularly sodium." We are then given Thudichum's views on the subject—viz., the oxidation of hæmatocrystalline into hæmatic acid, and the decomposition of the carbonates by the supposed All notice of the sodium phosphates in their relation to the absorption of carbonic acid is omitted. The account which follows, of Schützenberger's method of estimating oxygen in blood, is such a model of accuracy and brevity as to deserve quotation in extenso.

"Schützenberger, in conjunction with Ch. Risler, has determined the amount of oxygen contained in blood by adding to a given quantity an excess of standardised sodium sulphite, and estimation of the excess in an atmosphere of hydrogen. The quantity of oxygen may thus be determined within 2 per cent. The authors show that the oxygen of the blood does not act on the sulphite like free oxygen, but like oxygen combined

with ammoniacal cupric oxide." Mr. Kingzett might have copied from Schützenberger's paper the correct name of the reducing agent—viz., sodium hydrosulphate. It would also have been advisable to append some of Schützenberger's results. Regnault and Reiset's experiments are next alluded to, and, with a short reference to Barral, Beet, Fränkel, and Pflüger's experiments, the subject of blood is dismissed. In a previous chapter the processes for isolating the constituents of blood are alluded to, and very insufficiently described. Three pages are devoted to the presence of sugar in blood, while its

albuminous constituents are dismissed in a page.

As a rule, when Mr. Kingzett finds himself on familiar chemical ground, he has at least the merit of correctness, if not of relevancy. For the chemical reactions and decompositions of a number of compounds are given with a minuteness of detail worthy of a large chemical treatise. When he can lead the subject so as to bring in one of his own researches, however little it may bear on the subject treated of, it is done. Thus, we have three pages devoted to copper in the brain; while, with reference to an investigation of Mr. Kingzett's, on page 309, we are promised an account of the remaining inorganic constituents of brain matter at a later stage. This promise is evidently forgotten.

We now pass on to consider Mr. Kingzett's preface. He begins with the remark that the subjects treated of in his book occupied his attention for four years. We can quite believe it. As four years' training is the minimum required to render a medical student fit to commence an investigation, it is easy to account for Mr. Kingzett's want of knowledge of physiology. We are next informed that there were no fluctuations in the success attending the labours in which his services were involved. This, however, is a matter on which some might presume to differ with Mr. Kingzett. He goes on to state that pleasure is a different thing to different men; his remark may

appropriately be applied to his definition of success.

In the course of the book, we are treated to a number of Mr. Kingzett's views on religion and morals, in which it is difficult to decide whether shallowness or conceit have the best of it. We close with an appropriate quotation from the concluding chapter, entitled "Character." "Can, then, a man be held responsible for his actions? Man steps on to the platform of life, in some measure at least, an automaton. He is born of others, and finds himself with a head on his shoulders, but the quantity and quality of brain matter is not ordained of himself. He may be a genius, but, horror! he may prove a fool!"

Diphtheria: its Nature and Treatment, Varieties and Local Expressions. By Morell Mackenzie, M.D. Lond. London: J. & A. Churchill. 1879.

THIS little work is exactly what its title describes it to be, a description of the disease in its various forms, with the treatment. The author's reason for publishing it is also a sufficiently good one; it is that "nearly twenty years have elapsed since any English work has appeared on the subject of diphtheria."

We do not regard the work as one of the masterpieces of medical science, but all the same we are able to accord to it the praise of being an honest and successful piece of work. The disease is systematically treated of in its history, etiology, symptomatology, pathology, and therapeutics, and each section is dealt with in an exhaustive way. Chapters are added on laryngo-tracheal diphtheria or croup, on nasal diphtheria, and secondary diphtheria. We believe that the practitioner will find in these pages a thoroughly considered digest of the present state of medical science in regard to this disease, and as a work of reference in actual practice it will be found thoroughly satisfactory. In this regard the brevity and conciseness with which it is written, are a great recommendation. The chapter on treatment is, perhaps, the strongest in the book, as here the author's own extensive experience comes prominently forward. The directions are thoroughly practical, and free from any bias for special methods. This may, in fact, be regarded as characteristic of the book, which presents singularly little of the author's own views as distinguished from those of other

One naturally turns to that part of the work which deals with the relation of croup and diphtheria, and we find that so thoroughly is the author convinced of the identity of croup with diphtheria, that he describes the former under the heading "Laryngo-tracheal Diphtheria, formerly called Croup." The arguments pro and con are fully gone into; but the author has never had any doubt that membranous croup is always diphtheritic. In this chapter the sections on treatment are again particularly worthy of commendation.

On Diphtheria: its Nature, Varieties, Pathology, Diagnosis, and Treatment. By Robert Hunter Semple, M.D. Second Edition. London: Baillière, Tindall, & Cox. 1879.

This work, bearing almost an identical title to that noticed above, by no means fulfils the promise of its title page. We

expect, as in the former case, a systematic treatise on diphtheria, but we find nothing of the kind. What we find is, two memoirs, published in 1871 and 1872, and here reprinted, with an appendix intended to fill up what is wanting in these. The memoirs are of considerable value, but are engaged mainly on the question of the relation between croup and diphtheria. The only systematic chapter is that on treatment, which is comprised in 8 pages of the appendix. If the reader desires a powerfully written argument in favour of the identity of croup and diphtheria, let him turn to this work. But if, trusting to the title, he expects a treatise on diphtheria, he will be disappointed.

A great weight of medical opinion in this country seems to be in favour of the identity of these two diseases, and no doubt the work before us will add something of importance to that

side of the question.

Before, however, this absolute identity can be fully accepted, there are one or two matters which will need to be more fully taken into consideration than we have hitherto found them to be. It is clear that the general practitioner in this country sees a disease which he calls croup, and another which he calls diphtheria. If he designated by the name croup, only cases of diphtheria in which the disease is localized in the larynx and trachea, then we should expect the mortality from croup to run parallel with the mortality from diphtheria. But this is by no means the case. It has been shown that, according to the returns of the Registrar-General, the mortality from croup is evidently affected by the seasons of the year, while that from diphtheria shows a purely epidemic character. From these facts we are surely warranted in saying that the general practitioner calls something croup which is not diphtheria. Then, further, taking croup to mean a simple inflammation of the larynx and trachea, with a fibrinous instead of the more usual catarrhal exudation, we should infer that the existence of such a disease is probable from analogy. Taking the other extremity of the respiratory apparatus, we know that in acute pneumonia there is a fibrinous exudation filling up the air-vesicles, and this exudation generally extends some distance into the finer bronchi, forming fibrinous casts in them. The middle sized and larger bronchi are, as determined by a considerable number of published cases, occasionally the seat of a simple inflammation with fibrinous exudation—a bronchial croup. We should be surprised were the larynx and trachea never affected in a similar way. Again, it has been shown that croup may be induced in animals (rabbits) by applying such an irritant as ammonia to the mucous membrane of the trachea, the only requisite apparently being that the irritant shall be

sufficiently strong to destroy the surface epithelium.

We mention these facts, not as in our view determining the question in favour of the non-identity of croup and diphtheria, but simply as showing that it is probably premature to come to any dogmatic opinion on the subject. As a contribution to his side of the question, Dr. Semple's work is of value; but, as already indicated, we cannot recommend it as a treatise on diphtheria.

Dress, Health, Beauty: A book for Ladies, containing Practical Suggestions for the Improvement of Modern Dress, regarded from an Artistic and Sanitary Point of View. London: Ward, Lock, & Co.

WE make no apology for bringing this little work before our readers, although it bears on its cover that it is "a book for ladies." The subject of the book is really, the adaptation of female dress to the requirements of health; and this is surely a subject in which medical men ought to be interested. Following in the line of Mrs. Haweis, in her Art of Beauty, the present authoress—the writer is certainly a lady, though it is not explicitly stated—has the good sense to see that any violent departure from the present female costume is not to be thought of. "There seems a dread suspicion in the minds of some, that women have no other aim in their desire for dress-reform than that of adopting the hideous style of clothes worn by men." This aim she entirely disclaims, and devotes a long paragraph to "Where man's dress errs," in which she sharply criticizes its highly inartistic characters.

The main contention in this work is that, without anything that can be called tight lacing, the present system of suspending the various petticoats and skirts of a lady's dress from the hips, with or without corsets, produces the most serious results by compressing the abdominal viscera, and fixing the lower part of the chest. (It is here necessary to say that in perusing this book, it is necessary for Scotch readers to remember that the hips in English are the iliac bones, and not the buttocks). That this girding of the body between the lower ribs and the iliac bones is followed by distortion and displacement of the abdominal organs, is abundantly proved by the experience at post mortem examinations in large hospitals. In these hospitals it is mostly working class women that are admitted, and there

can be no serious imputation of tight lacing, yet we believe it is the experience of nearly all pathologists that, in a very large proportion of the female bodies, the liver is depressed and flattened, and presents a shallow depression on its upper surface, while the chest is elongated by the compression of its lower part. When the clothes are hung round the waist in the usual way, it is almost necessary to wear corsets in order to distribute the pressure which might otherwise be unbearable, and it is by means of the corsets drawn in at the lower part and resting on the iliac crests (or hips) that the lower ribs are compressed.

Secondary to this main defect is the faulty distribution of the clothing, and its undue weight. The chest is covered with many layers of cloth, and the waist has accumulated wrappings, sometimes of enormous number, but the legs and feet are generally very imperfectly clad. Thin drawers are frequently the only direct covering of the legs, and to keep up the heat, skirts are added, which increase the weight, but do not proportionately add to the warmth. The use of thin stockings, of garters, of boots which crush the toes together, and so on, is commented on in a fairly reasonable manner.

We do not propose to enter here on the remedies proposed for these evils of female dress. The main reform is the suspension of the lower garments from the shoulders, either by braces or a Basque bodice. The details of these arrangements, and all the suitable directions, are here contained, and may be left to

those whom they most concern.

As to the work as a whole, we may say that there is a good deal of that exaggerated statement, and hyper-enthusiasm which seems to be inseparable from the writing of most female authors. There is also a large amount of repetition and unnecessary iteration, indicating a certain lack of literary But we believe that, speaking generally, the views enunciated are sound; and that if the advice offered were adopted, a much needed reform would be introduced. It is to be added that these changes would not interfere with the beauty of female dress, but would rather enhance it by giving freer play to nature and art.

REPORTS OF HOSPITAL AND PRIVATE PRACTICE.

GLASGOW ROYAL INFIRMARY.

UNDER THE SUPERVISION OF DR. J. WALLACE ANDERSON.

From Dr. Macewen's Wards.

OSTEOTOMY FOR DEFORMITY OF THE LOWER LIMES.—One morning lately Dr. Macewen delivered a clinical lecture on the operation of osteotomy for deformity of the lower limbs. He has at present ten such cases in his wards, and five of these, which were about to be sent to the Convalescent Home, were shown to the class. Two had been cases of bow-leg, two of knock-knee, and one of angular anchylosis of the knee joint. In all the limbs were now straight, and the joints movable.

Dr. Macewen considered, first, the age for operating. In the Lancet of 28th December last he stated that he preferred performing the operation when the patient was about 8 or 9 years of age, and certainly not above 20, but since then he had changed his opinion considerably. They had all seen in his wards several patients much older on whom the operation had been performed. There was one aged 22, another over 26, a third 27, and a fourth 32. In only the first of these, a double osteotomy, was the temperature ever above normal, and that only on two evenings, which was very satisfactory. In the others the temperature was absolutely normal, as the charts now shown to the class indicated. There was little pain complained of by any of them, and the discharge was very slight, and only sanious; there was no suppuration. It was evident, then, that the operation could be performed with safety up to 32. At the same time, it must be remembered that above 20 the bone is much denser in structure, and more apt to split. As to the kind of instrument to be employed, it has been said that a carpenter's chisel would do. This has been used by Dr. Macewen in cases under 20; but, generally speaking, it is not a form of instrument to be recommended, and in no case does he use it now. It will do if you intend to remove a piece of bone, but if you wish simply to cut the bone straight across, you will require a blade which is bevelled on both sides. Dr. Macewen then showed several kinds of instruments, and recommended one of the following construction:-The handle

is not round but octagonal, which enables one the more easily to detect any rotatory deviation which may occur. The blade is about 31 inches long, 1 inch broad, and tapering from 1 to inch in thickness, and then bevelled on both sides to a finely cutting edge. The whole instrument is in one piece, and is made of the finest "5 Stubbs' steel," tempered very hard for about & inch from the point; not more than this however, for then it would be apt to snap if fixed far into the bone. This instrument would not break, it would rather bend. The length of the blade is marked in inches on the side, from base to point, to assist the operator, should such aid be necessary, in judging how far he has penetrated the bone. The handle is so expanded at its extremity as to form a surface which looks down the blade, the use of which will appear immediately. Dr. Macewen then described the method of withdrawing the blade when firmly fixed in the bone. It must be done with such a firm, steady, vertical movement as will prevent its being set free with a jerk, and so escaping beyond the osseous incision. To effect this he recommended that the chisel be held in the left hand, and the thumb extended so as to press on and be steadied by the expansion just referred to. Dr. Macewen thought the instrument might be called, with advantage, an "osteotome." It was not like any chisel he had ever seen, and it was purely a cutting implement, while a chisel was that and something more. Many patients, too, on hearing the more familiar word, objected strongly to the use of such an instrument in their case. Dr. Macewen then proceeded to describe the operation. The patient must be thoroughly under chloroform, so that the knife may penetrate at once to the bone, and the osteotome be inserted through the incision without the risk of the latter being altered in form by any movement of the limb. The length of the wound need only be the breadth of the chisel—not more than half an inch. This incision is made on the inner side of the femur, from 1 to 2 inches above the spine for the insertion of the adductor magnus muscle, the precise distance varying according to the height of the patient; it is carried down to the bone. The osteotome is then passed longitudinally through the opening until it comes in contact with the bone, when it is turned transversely to the limb. lower portion of the edge is now pressed firmly against the bone, and brought well to the posterior aspect of the femur in such a way as to push the soft tissues carefully aside. The osteotome, being held in this position, is made to divide the bone in a direction from within outwards, and from behind forwards. It is next directed towards the upper surface and

inner border of the femur, and the bone having been divided there the osteotome is driven obliquely from before backwards and from within outwards, so as to strike on the outer posterior border of the femur. It must be noted, in connection with this description, that the outer and inner borders of the femur here are of such a breadth relatively that you cut, as it were, from apex to base-the further you proceed the more is the osteotome embedded in bone. Operating in such a way therefore, there can be no fear of injuring the soft parts. After a little practice one begins to recognize, by the sensation communicated to the hand, that the osteotome has passed through the soft cancellated tissue, and has reached the external dense layer of bone; at this point the incision is stopped. instrument ought not to be removed from the wound till the surgeon is done with it. Occasionally it may be necessary to exchange it for one thicker or thinner, but that can be the only reason for removing it till the operation is completed. The incision having been made as described, the limb is forcibly straightened, and put up in a half box-splint, the outer border of which is carried almost up to the axilla. The surgical anatomy of the parts was then referred to, and drawings were shown to the class representing these. The synovial pouch, the epiphysis, and the vessels in their relation to the operation were pointed out, and a transverse section of the femur at the seat of the operation was shown, illustrating very markedly, the great difference in the thickness of the bone on its inner and outer sides. At the end of the lecture a case of knockknee was operated on, before the class, to illustrate practically the principles laid down in the lecture. In order to provide a firm and reliable support for the limb during the operation, Dr. Macewen made use of a large sand bag partially filled, as suggested to him by Mr. Beattie, one of his students, and this he continues to use in all such cases.

FROM DR CAMERON'S WARDS.

Reported by J. HERBERT, L.R.C.P., L.R.C.S., Ed.

THREE CASES OF COMPOUND DEPRESSED FRACTURE OF THE SKULL—RECOVERY.—Case I., J. N., et. 18, was admitted 12th July, 1878, into Ward XVI, suffering from a compound depressed fracture of the skull, caused by a fellow-workman striking him a severe blow on the head with a 4 lb. weight. On examination, a large wound was found on the back part of the head, at the point of junction of the occipital with the two parietal bones, and in a line with the saggital suture. This wound

communicated with a depressed fracture of the skull, a large plate of bone having been driven in. The patient was semidelirious when admitted, having a very feeble, slow and somewhat irregular pulse. His face was pale, and the pupil of one eye was a little more dilated than that of the other. Patient vomited at intervals, and complained of great sense of cold, with inclination to shiver, although hot-water tins had been applied. After the hair had been shaved from the scalp, the wound was very carefully and thoroughly injected with 1-20 watery solution of absolute phenol, and antiseptic dressing applied; all under the spray. The patient then expressed himself as feeling comfortable, and fell into a quiet sleep. Ordered to have as diet iced milk only. He continued to go on perfectly well, and was dressed daily till April 16th, the fourth day, when he again became restless and slightly delirious, accompanied by chilliness and flushings of the face during the night. This however, soon passed off after a brisk purge of calomel and jalap had been given. The patient never had another bad symptom after this. His usual temperature in the axilla during the entire treatment was, in the morning, 98°4 Fah.; in the evening 98.6 Fah., and never was noted above 99°.4 Fah. The wound healed without a trace of suppuration, and he was dismissed on the 10th August, 1878, well.

Case II., W. M., et. S, admitted into Ward XVI, on 14th September, 1878, suffering from compound depressed fracture of the frontal bone, caused by his falling from a tree, his head coming in contact with a sharp edged stone below. The accident had happened the previous evening. The wound was situated over the frontal bone, and was about two inches in length, and on examining with a probe, a circular piece of bone was found to be driven in to a considerable extent. The wound was cautiously injected with 1-20 watery solution of absolute phenol, under the spray, and carbolized cat-gut used for drainage; over this antiseptic dressings were placed. The only indication of cerebral disturbance was that the boy had a slow and irregular pulse. He was ordered perfect rest and quiet, and to have iced milk alone as diet. Dressed the wound daily, and on 18th September, the following notes were taken: - "Patient has slept well last night-is quite conscious -no complaint of pain. Temperature this morning, 98°8 F., —pulse 72, and a little irregular—tongue clean. There is a slight malar flush—pupils natural." He continued to be dressed daily until 24th September, when the following notes were made:- "Patient still perfectly well in all respects, and with a normal temperature—pulse 64, with a very occasional irregular beat—had a small dose of castor oil, which acted well." After this he continued to be dressed every second or third day. His temperature throughout was practically normal, and he was dismissed from the hospital, 14th October, 1878, well.

Case III., J. G., et. 25, Îrishman, admitted into Ward XVI, on 4th March, 1879, also suffering from a compound depressed fracture of the skull, caused by the fall of a huge piece of stone in the quarry in which he was working. There was found first a large wound extending across the frontal bone from one temple to the other, and penetrating the pericranium, but there was no fracture of the bone here. There was a second and much more serious wound situated at the junction of left parietal and occipital bones; it was crucial in shape, and measured fully three inches in each direction, and here a large piece of the cranium was driven in a considerable distance, a portion of it being comminuted. A large quantity of hair also, as well as dirt, had been driven in between the broken plates of bone, and was with great difficulty picked out with dissecting forceps. The head was then shaved, and both wounds were cautiously injected with phenol solution under the spray, and dressed with the usual antiseptic precautions. When admitted, he was distinctly under the influence of alcohol, having had administered as a restorative, by his friends, several glasses of brandy and one of rum. As he was unable to pass his urine, it was drawn off with a catheter for two or three days in succession, at stated times. The pulse was 105 respiration about normal—pupils dilated if anything—ordered to be kept strictly quiet in recumbent posture, and diet to be iced milk. March 5th—Patient restless last night, but still no symptoms of compression. The wounds were dressed, and looked well. March 6th.—Dressed to-day, and found perfectly aseptic. March 7th.—On changing the dressing to-day, a little hæmorrhage was observed to have taken place from the wound over the fracture—ordered a dose of castor oil. March 8th.— When dressed to-day, it was found that a little further hæmorrhage had occurred. As the aperient had not acted, a good dose of black draught was given, which soon purged the patient freely. Continued the spray dressings daily until 20th March—afterwards every third day. On 5th April he was allowed to be up in the ward for a short time, and on the 8th, the last antiseptic dressing was applied. On the 10th, the wounds were found to be perfectly healed, and the patient was dismissed well, having had a normal temperature from beginning to end.

WESTERN INFIRMARY.

Under the Supervision of Dr. W. G. DUN.

FROM DR. PATTERSON'S WARDS.

STRANGULATED INGUINAL HERNIA-OPERATION-DEATH-POST MORTEM APPEARANCES.—J. D. was admitted on the evening of 19th March. He was a stout, strongly built man of about 50 years of age; there was a history of an inguinal hernia of about thirty years' standing, as far as could be learned, and for this length of time the patient had been known to have worn a truss. On the evening preceding admission the hernia had come down, and all attempts at reduction had been unsuccessful. When admitted, about twenty-four hours after the occurrence of the strangulation, he was suffering severely from shock, the constitutional symptoms being altogether out of keeping with the short duration of the case, the abdomen was swollen, and there were distinct symptoms of peritonitis. The patient had been vomiting, but the vomited matter does not seem to have been stercoraceous. When admitted the house surgeon seemingly easily reduced the hernia, which, however, always returned, acting very much like an ordinary reducible hernia; on coughing, a distinct impulse was felt, but it was observed that when the attempt at reduction was made, the feeling of gurgling, so often experienced on the complete reduction of a hernia, was absent. The seeming reduction having given apparently no relief to the dangerous condition of the patient, Dr. Patterson was sent for, and on his arrival he proceeded at once to operate. From the very first Dr. Patterson entertained a very unfavourable opinion of the case. On cutting down upon the hernia—the sac of which consisted of the tunica vaginalis—a good deal of blood and bloody serum escaped, showing that the stricture was of a very tight description. The protruded bowel was of a dark claret colour, and was easily passed through the external abdominal ring, which at first sight seemed to be the seat of the stricture; but on passing the finger further up the inguinal canal, it was found that the seat of strangulation was at the internal ring, and, after pulling the bowel downwards, Dr. Patterson managed with the point of his finger to widen the stricture here sufficiently to allow of the bowel being returned into the abdomen. The operation was performed under the spray, and the usual antiseptic dressings applied. survived the operation only twenty-four hours.

The post mortem examination explained quite clearly the cause of the seeming reduction. The following is Dr. Coats' report:—The hernia is found to be a congenital one, that is to say, the sac, as shown by the position of the testicle, is formed of the tunica vaginalis, which stands in open communication with the peritoneal cavity. This communication between the tunica vaginalis and the peritoneal cavity is somewhat elongated, and the aperture by which it opens into the abdominal cavity is rather narrow. Besides this ring, there is another partial constriction of the sac some distance down from the aperture. In this situation the constriction is formed by a kind of imperfect diaphragm, which projects from the wall, and partially divides the sac into an upper and lower compartment. It is as if, at this point as well as at the very narrow aperture, there had been an attempt to close the communication between the tunica vaginalis and the peritoneal cavity. A long tag projecting from the great omentum was adherent to the sac below the partial diaphragm, but this was obviously of very old standing, and there was no constriction. There was no intestine in the sac, but on examining inside the abdomen, a loop was found presenting a deep brown colour. At the upper and lower extremities of this portion, there was a part of the intestinal wall of a dead white colour, and here the coats were thinned. On turning the gut inside out, it was seen that the sloughing of the coats was considerably more extensive internally than externally.

TWO CASES OF OVARIOTOMY—RECOVERY.—Dr. Patterson has recently had under his care two cases of ovarian tumour; in both cases he operated, and with excellent results. The

following are brief notes of the cases.

Case I. E. M'M., unmarried, aged 27, was admitted on 3rd March, 1879, suffering from a tumour of the abdomen, for which on two previous occasions she had been admitted, but only remained for a few days on both occasions, it not being thought advisable to operate. The tumour had been diagnosed as ovarian on her first admission.

The woman stated that the swelling of the abdomen had been noticed by her first about two years ago, and she thought it had appeared pretty suddenly, and had grown but little from the date of its appearance. It had caused her a good deal of distress, and had incapacitated her for her regular occupation as a weaver. On 1st October, 1878, the circumference of the body at the umbilicus was 31 inches, and at the date of her final re-admission measurement at the same level

showed an increase of about 3 inches. The patient's general health was good. The contents of the tumour seemed quite

fluid, and it was regarded as unilocular.

On March 13th Dr. Patterson removed the tumour. The incision in the abdomen was about 2 inches in length, the cyst was found to be unilocular, free from adhesions, and contained 11 pints of fluid, none of the fluid escaped into the abdomen, and there was no protrusion of the bowel at the wound. The pedicle was secured by means of a piece of catgut, the actual cautery was not applied. The patient rallied soon from the shock of the operation, though she vomited both during the operation and five hours after. The case continued to progress favourably, rest being secured at first by means of morphia suppositories. The dressings were not disturbed till the eighth day after the operation—union had taken place by this time throughout the whole length of the incision; at the next dressing, on the 24th, two stitches were removed; on the 31st the remaining stitches were all taken away; and on 4th April antiseptic dressing was discontinued, a piece of boracic lint being simply applied. On 6th April patient was able to leave her bed, and on the 9th she was dismissed well.

The average temperature throughout the case has been—morning 100°.7, and evening 101°.7; the highest temperature noted being 103°.4 on the afternoons of March 18th and 24th.

Case II. Mrs. MJ., aged 45, was admitted on 12th March with a tumour of the abdomen of fifteen months' duration. When first observed the swelling was situated to the left of the middle line and 2 inches below the umbilicus; it increased slowly for a good many months, but for two months before admission its growth had been much more rapid. Patient has had nine children, her last pregnancy having been 5 years ago. She is a thin spare woman, but she had been falling off in flesh lately, and her appetite had been failing. Till two months before admission she had been able to attend to her household work without experiencing any difficulty or pain from the presence of the tumour; decided pain in the abdomen began about a month before admission, and seems to have been connected with a straining effort put forth in lifting potatoes from a potato pit, when she felt as if something had given way. Her sleep had been greatly broken. On inspection, the tumour was seen to be globular in shape, it was dull to percussion, percussion in the flanks being clear, the contents were extremely fluid, the umbilicus was prominent, and the skin of the abdomen tense and stretched. The tumour could

be partially moved from side to side, one or two hard portions could be felt a little below and to the left of the umbilicus, and at one part a sensation almost of creaking could be easily felt with the fingers; this disappeared however before the operation. The circumference of the body at the umbilicus was 35 inches.

March 26th, Dr. Patterson operated to-day. The length of the abdominal incision was about 4 inches. The cyst was punctured, and a large amount of thick serous fluid removed, the bulk of the tumour still remained considerable, and after removal it was found to contain numerous secondary cysts, one of considerable size containing bloody serum, and many small ones containing thick gluey material of various colours. There were no adhesions of the tumour with the abdominal viscera. The pedicle of the cyst was ligatured with cat-gut. There was no protrusion of the bowel in this case either; a small quantity of the contents of the cyst escaped into the abdomen, but was at once sponged away. The first dressing was on the fifth day after the operation, the wound was quite healthy in appearance, and union of the deeper parts seemed to have taken place. The progress of this case has all along been most satisfactory, and the patient will soon be able to leave the hospital. On the fourth day after the operation the temperature was 98°.4, and till 8th April the morning temperature has averaged 99°, and the evening 99°.7.

In both cases the operation was performed under the spray; the usual antiseptic dressings were used, and in the subsequent dressings the same antiseptic precautions were employed. In both cases also the wound was closed with sutures of silver

wire, and no drainage tube was employed.

FROM DR. GAIRDNER'S WARDS.

CASE OF EPILEPTIFORM CONVULSIONS, &C., CONTINUED FROM JANUARY NUMBER—CONCLUSION OF CASE.—In the January number a note is made of the case of T. F., who suffered from epileptiform convulsions, &c. It was then observed that there had been very marked improvement under the continuous use of Donovan's solution (for two months and a half), the severe attacks being at long intervals. A change, however, soon took place in the case, the fits became much more frequent, and assumed a different character. This change seems to be related to a fright which he had on 9th December, and which left him for a few days in a more or less nervous state. On the 13th, the fits which before had commenced at the tips of the fingers, as described in the January number of the Journal, originated

now in the foot, causing flexion of the toes, so as to arrest patient suddenly in walking. In very many attacks the lower limb and side were alone involved, and the spasm did not often reach the upper extremity or the face and neck as in the earlier part of the case. Another difference in these later attacks was the complete absence of the temporary aphasia. There was a very decided visible impairment of the power of the lower limb in walking, to a much greater degree than was observed at any time since admission, and exactly of the type usual in imperfect hemiplegia. In the upper extremity, there was no corresponding retrogression. The fits became very frequent, for some time not less than 100 in the day, and probably many more. He never lost consciousness during any of the later fits, and almost all of them were attended by pain, more or less excruciating, in all the parts convulsed, the pain being even more violent than that which accompanied the major spasms. There was no distinct aura, but he had the sensation "as if something was going to happen." On 28th January, a sudden cessation of the fits took place, and from this time till the date of dismissal, 21st March, only three fits were observed, two of them being of a severe character. Since the cessation of the fits, gradual improvement went on in all the symptoms, both mental and physical.

The treatment during the later stages of the case was by iodide of potassium, which was first given on the 23rd of December, and discontinued on the 5th of January, on account of the appearance of boils, furred tongue, and other probable symptoms of iodism, without any corresponding improvement in the disease. The maximum dose during this period of administration was 30 grs. three times a day. It was begun again on the 15th of January, in 10 grain doses, and carried rapidly up to a dose of 60 grs., making a maximum quantity administered of 180 grs. daily for five days, from the 25th to the 30th January. At this time a careful note was taken, from which it appears that the curative effect of the iodide was still a matter of doubt, while a succession of phlegmonous appearances, simulating large boils, or even erythema or incipient carbuncles, arrested attention as being precisely similar to what had previously been attributed to the iodide, when administered in smaller doses. All medication was therefore stopped, and it was apparently precisely at the moment when the disturbance of system attributed to the iodide was at its maximum with febrile temperatures, extending as a maximum up to 104°8 F., on the evening of the 28th January, that the great improve-

ment began which is indicated above.

GASTRIC ULCER ASSOCIATED WITH DILATED STOMACH—RESULTS OF TREATMENT.—In the March number of the Journal allusion is made to a case of undoubted ulceration of the stomach, with equivocal signs of dilatation. In this case mechanical emptying of the stomach had been unsuccessfully attempted, and, as was noted in March, Dr. Gairdner had ordered a trial of the Carlsbad-Sprüdel salts, as recommended by Ziemssen. addition to the administration of the Carlsbad salts in cases of this kind, Ziemssen also advocates a special diet, the essential feature in which is frequent meals of good quality—for instance, in the case of this patient, an old woman, she had, in addition to other food, chicken twice a day, and roast beef once a day. Ziemssen also, in his scale of diet, allows a certain quantity of wine, for which, however, in this case, milk was substituted. The following is an exact note of the dietary allowed in this case :--

At 7:30 a.m., White bread with coffee and milk.

" 10.30 " Piece of chicken and white bread.

" 1 p.m., Piece of chicken, white bread, and half pint of milk.

" 4 " Half pint of milk and white bread.

" 7 " Cold roast meat, white bread and pint of milk.

" 8·30 " Bottle soda water.

The dose of salts was a tea spoonful and a half daily; later, however, a smaller quantity was found sufficient, when the Carlsbad salts began to act briskly, to the extent of sometimes half a dozen stools in the day, and not unfrequently with some degree of pain, which however subsided as the treatment went on, and the amount of purgative action diminished with the reduction of the dose. It may be said that vomiting ceased to be at all a feature of the case from this period onwards, and of course sarcinæ were never observed. Any pain experienced was referred, not to the stomach, but to the bowels, unless it were a certain amount of heartburn and feeling of heat, for the relief of which symptoms she experienced great benefit from the use of bismuth, to which she had been habituated for a long time before admission. The abdomen was well filled up, and there was no special gastric fulness, nor any extended suc-The result in this case seems to show that a cussion area. saline purgative practice (perhaps preferably by Carlsbad salts), is very useful in some cases of unquestionable gastric ulcer, associated with dilatation of the organ. It would be difficult to find a case in which the diagnosis, apart from post mortem examination, could be more clearly made than in this one; the long duration of the symptoms probably excluding cancer,

while the frequent hæmorrhages, the dilatation of the stomach, and the sarcinæ, pointed to an ulcer situated near the pyloric extremity, and leading to a possibly spasmodic closure from time to time of that orifice. It is noteworthy that patient had herself been in the habit of using carbonate of soda to relieve the acidity, along with emetics of hot water. She had also become addicted to the use of considerable doses of bismuth, and continued the practice after admission to 20 gr. doses, used whenever she felt unusual gastric irritation, along with the other remedies. Hypodermic injections of morphia were considered quite indispensable to secure sleep in the earlier periods of the case, but were almost entirely withdrawn after the Carlsbad salt was got into thorough action.

ABSCESS IN LEFT LUMBAR REGION OPENING INTO INTES-TINAL CANAL—PUS IN URINE.—J. M'L., labourer, aged 28, was admitted on 29th January, 1879, complaining of pain in the abdomen, and of occasional pain in micturating. About twelve weeks before admission, he had been struck by an iron plate on the lower part of the belly. No discoloration of the skin was caused, and no attention was paid to the matter; but about a fortnight after this occurrence he had a severe shivering, followed by pain commencing in the region of the left kidney, and passing down to the point of the penis. The pain was entirely restricted to the left side. The shiverings recurred every night till about a fortnight before admission to the hospital, and were distinctly associated with an aggravation of the pain. About three weeks after the pain commenced, he noticed that his urine was white and thick, but changing in the course of a day or two to a reddish colour. Micturition was occasionally very frequent, but the quantity of urine seems to have remained about normal. Retraction of the testicle sometimes occurred. Nausea, which now and then went on to vomiting, appears to have been a characteristic of this illness, especially in its earlier stages. His general health has suffered since the commencement of his complaint.

On examining the abdomen, a distinct tumour was easily detected in the left lumbar region. Percussion in this region revealed dulness, extending from the hypochondrium to the anterior superior spinous process of the ilium, and the dull area presented a somewhat crescentic border, with the convexity towards the middle line. On passing one hand behind the left loin, and placing the other on the front of the abdomen, the tumour was easily felt. The dulness included the area of splenic and renal dulness, so as not to be distinguished by its

form from either, but the distinct rounded margin anteriorly, which would be expected in a splenic enlargement, was wanting. Beyond the presence of the tumour, there was nothing else calling for particular notice in the condition of the patient. The urine contained a considerable deposit of pus, and usually gave the blood reaction with guaiac and ozonic ether, even although the presence of blood was not indicated to the eye. Shortly after patient was admitted, Dr. Gairdner consulted with Dr. Macleod as to the propriety of surgical interference, but as it was impossible to be quite sure as to the seat of the abscess, it was considered expedient to await the course of events without operative interference. The amount of purulent sediment in the urine continued to vary considerably, being on some days entirely absent to the naked eye, but on other days the quantity of pus was so large as to form a sediment equal to about one-seventh or one-eighth of the urine. No diminution in the size of the tumour took place, indeed it even presented somewhat the appearance of a lumbar abscess, as if it was likely to extend down deeply in the direction of Poupart's ligament, or even towards the left thigh; nothing like pointing however took place, on the contrary it seemed to become more diffused. The idea of surgical interference was again entertained, when the following occurrences took place which, for the time at least, postponed all such action. These consisted in the vomiting and passage by the bowels, on frequent occasions, and over a period of some weeks, of large quantities of pus, mixed with other matters from the alimentary tract. As regards the quantity passed per anum, Dr. Gairdner entertained no doubt that it amounted in all to the extent perhaps of a wash-hand basinful. On one occasion alone a quantity of very decidedly purulent matter, amounting to about 30 or 40 oz., was evacuated from the stomach. The urine still continued to contain considerable quantities of pus. The first observation of the discharge of pus into the intestinal tract was on the 28th February, and a few days thereafter it was found that the tumour had become plainly less tense and voluminous, but that it still maintained essentially its former position, and with less change than might have been expected after so great a discharge; the abdominal pain complained of was obviously relieved. A gradual and steady improvement has been maintained, and at an examination of the patient on 16th April, no trace of the tumour could be made out, the area which had formerly been dull being now quite tympanitic to percussion. The health of the patient had greatly improved, and he had been able to sit up in bed for some time past. The urine still

continues to show a slight sediment of pus. What Dr. Gairdner most fears now is that the hitherto sound kidney, as well as the liver and spleen, may undergo amyloid degeneration, as a result of the protracted suppuration in and around the right kidney. No indication of such a condition is as yet visible, the size of

the liver still being quite normal.

This was regarded by Dr. Gairdner as probably a case of perinephric abscess, but whether originating in the kidney, or in the parts around it, no opinion was formed further than that the discharge of pus in the urine seemed to show either a primary or a secondary connection with the pelvis of the kidney, the physical diagnosis pointing rather to a diffuse lesion than to a mere enlargement of the kidney itself. When the evacuation into the intestinal canal occurred, the question of diagnosis became additionally complicated, for it was observed that on the one hand there was no evidence of escape of urine otherwise than by the natural channels, and on the other hand the urine showed no trace of contamination with foreign matter other than pus. Dr. Gairdner's opinion now is that most probably the perinephric abscess and the source of pus within the kidney, are distinct though possibly more or less connected lesions, but as to the nature and site of the communication with the alimentary canal evidence is still wanting, the case being an extremely rare one.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1878–79.

MEETING VII.—24th Jan., 1879.

Dr. Morton in the Chair.

Dr. D. C. M'Vail gave a short account of a peculiar heart murmur. See p. 337.

Dr. Charteris said that little stress could be laid on the fact which Dr. M'Vail had mentioned as corroborative of the

peculiar sounds being actually heard—viz., that the students had also heard them. He found, as a rule, that a student heard the identical sounds which the teacher heard. It was a case in which, to be able to give an intelligent opinion, one would require to have examined it personally. The first murmur was certainly mitral regurgitant; the second was doubtful. In a case which he had lately seen, there was a murmur following the second sound, and heard only at the ensiform cartilage. Post mortem examination revealed that the aortic valves were diseased. The murmur had been aortic regurgitant.

Dr. Joseph Coats said that there appeared to be several objections to Dr. M'Vail's theory of the causation of the murmur in this case. He had said that in some instances the murmur came immediately after the second sound. Now, the ventricle was entirely empty of blood at the time of the closure of the aortic valve. Where, then, was the blood to come from? Besides, if Dr. M'Vail's explanation were correct, should there not be an additional apex impulse in connection

with the murmur?

Mr. John Reid said that the fact of the murmur occasionally disappearing entirely, and that it improved under digitalis, appeared to point to some merely accidental origin. In cases of extreme dilatation of the left ventricle he had heard a murmur of this kind. It appeared to arise from a kind of vibratory motion from the state of dilatation of the ventricle. In one case there existed a murmur from which he could not make out in what state the heart was, but he thought it might be something like pericarditis. On post mortem examination he found the pericardium had been adhering almost to the entire extent of the heart. The surface of the heart presented the pine-apple appearance described in text books.

Dr. Morton said that Dr. M'Vail's explanation had occurred to himself, but there was also another possible explanation. In this case there was mitral patency. Now, after a full contraction of the heart, and after the second sound, it was quite possible there might be a short interval before the blood found its way from the left auricle to the left ventricle. Immediately a little blood might find its way back, and the passage of this blood might have caused the murmur, or rather the slight contraction which caused the murmur. Under digitalis the contraction of the ventricle would be more complete, and the

murmur would disappear.

Dr. Stirton said that he was much mistaken if he had not heard some modification of the heart sounds very like those in the present case, and on post mortem examination there was revealed a partial aneurism behind the left ventricle, which caused the second murmur.

Dr. M. Vail said that, independently of the students, the existence of the murmur had been verified by the assistant physicians, and also by one of the dispensary physicians. He had tried unsuccessfully to get some of the physicians to examine the case, which was under care in the holiday month of August. Dr. Coats had put his finger on the two weak points of his explanation. Undoubtedly, if his explanation was correct, there ought to have been an additional cardiac That there did exist such an impulse he could not say positively, but he was inclined to think there was. Dr. Coats' other objection postulated as true what was still a matter of doubt. It was not yet quite established that the ventricle discharged its blood completely into the aorta at each contraction, either always or ever; and in this case it was especially doubtful from the great cardiac irregularity. But in every case during the ventricular contraction the auricle was filling, and the charge of blood at once dropped from the auricle into the ventricle, on the cessation of its systole. And this, if instantaneously thrown back by the ventricle into the auricle, would produce a sound at the rough or roughened auriculoventricular orifice almost at the same instant as the occurrence of the second sound. In this case there were no physical signs of aneurism, and in such a case as Dr. Stirton supposed, the murmur would have been regular after the second sound, as the aneurism would be always at the same place.

DR. A. D. STEWART read "The Percentage Registration of the Sensitiveness of the Conductive Apparatus of the Ear to Resonant Impulses of Minimum Intensity." See p. 353.

Dr. Cassells said that the paper was an able one, but the subject was not worthy of the ability displayed in its treatment. It was matter of no practical importance at all to determine degrees of acuteness of hearing by the tick of a watch. The reason was that this formed no criterion of the capability of hearing the human voice. It was no uncommon thing for a person to be able to make out a watch tick fairly well, who had the utmost difficulty in hearing the human voice, and vice versa. He himself had produced artificial deafness in a person so as to make him unable to hear any outside sounds, or any of the sounds in the room, and yet he could hear the tick of his watch at a distance of ten feet, being four feet more than the ordinary hearing distance for his watch. He had enunciated the same opinion as he was now expressing,

at the Brussels Congress. This subject had been the *ignis* fatuus of young aurists; but all attempts to elaborate measures or tests of acuteness of hearing in the lines followed in this paper led to no practical result. The plan followed by Dr. Stewart was essentially that of Dr. Prout of New York. It was of far more importance that an aurist should spend his time in cultivating the power of diagnosis, than in these kinds of unpractical tests. The measurement of the conduction of sounds was a different matter altogether, and was an inquiry conducted with a view to an intelligible end.

Mr. Tennant thought the end aimed at by the paper—viz., uniformity of tests employed by different surgeons, was a

praiseworthy one.

Dr. George Buchanan made a few remarks laudatory of the

paper.

Mr. Glaister said that he had thought on this subject, and had intended to approach it in another direction. He was of opinion that a musical measurement of hearing could be devised. Thus, when any note was sounded a certain number of vibrations acted on the normal ear, making that note audible within certain ascertainable limits. It might, therefore, be possible to work out for the ear the idea on which Snellen's types had been devised as a test of vision.

Dr. Stirton said that though Mr. Stewart had correctly enunciated the law that the intensity of sound was inversely as the square of the distance, yet, in constructing his formula, he had gone on the wrong assumption that the intensity was

inversely as the distance.

Dr. Barr said that the paper displayed considerable ingenuity. At the same time he thought the method at present adopted by aurists of registering hearing distance was convenient, and for most purposes sufficiently accurate. That method simply consisted in expressing the hearing ability of any person as a fraction of which the numerator was the distance at which the person could hear the watch, and the denominator the distance at which the watch could be heard by a normal ear.

Dr. M'Vail said that he must take exception to Dr. Cassells' averment that the tick of a watch was not a proper test of acuteness of hearing, and that the capacity to hear the human voice was really the proper test. The tones of the human voice were very complex; no two people spoke with the same tone. Even a deaf person would make out what another said, if, especially, the tones were familiar to him, while all the time he would not hear a word uttered by another person who spoke much louder. This was partly owing to the musical

tone of the one voice as compared with the other. The ticks of a watch were as nearly as possible primary sounds, and, as a physiologically accurate method, nothing could be better than taking as a test short, explosive, rudimentary sounds.

After a few words by Dr. Cameron, Mr. J. Reid said that he

thought the paper a good one.

Dr. Menzies said that in certain cases a person could hear the tick of a watch when he could not hear a person speaking, and vice versa. At the same time he thought the paper a good one.

Dr. Shand said that some low sounds were not so easily heard as others; and he approved of the suggestion that a

particular musical note would be the best test.

Dr. Morton pointed out, as a curious fact, that a deaf person could in some cases hear in the midst of a crowded and, therefore, noisy street words spoken at an ordinary pitch, which he would not have heard if uttered with surroundings quite

silent. How was this anomaly explainable?

Dr. Cassells said that in regard to Dr. Morton's query, why deaf people heard better in a noise, his explanation was this: for hearing, a certain amount of intra-labyrinthine tension was necessary; but when the noise was great there occurred a stiffening of all the tissues. From this it happened that a man of healthy hearing was sometimes deafened in a noise which made a deaf man hear.

Dr. Stewart said that the watch had been long used as a measurer of hearing. Politzer—who by the way could scarcely be called a "young aurist"—seemed to have felt the necessity of having a better instrument. Accordingly, he had brought forward one which gave out a kind of clicking sound produced by a percussion hammer. A tuning fork would not be a suitable instrument. What was wanted was a sudden clicking sound. The musical note might or might not be audible in a given case. Moos had discovered what he called "bass deafness." Tindall mentioned that in one of his expeditions he heard the chirp of a cricket which was inaudible to his friend beside him. The voice being a complicated musical sound was obviously out of court as a test.

MEETING VIII.—7th February, 1879.

Dr. Fergus, President, in the Chair.

Dr. G. H. B. MACLEOD read "On Ice Accidents." After dwelling on the frequency of accidents during the recent severe

weather, Dr. Macleod went on to mention the nature and variety of those which had come under his observation at the hospital and in private practice. These had given him an opportunity of reviewing various questions regarding several of the more usual of these injuries, and especially as regards fractures in the neighbourhood of joints. He desired to bring before the Society, for discussion, a few of these observations.

It was not to be supposed that most of the facts dwelt upon were unknown to clinical teachers; but the author thought it had been certainly shown by the treatment followed in many of these cases before they came into hospital, that their true nature and management were not so well understood by many members of the profession as they should be. In the recognition of several of these injuries errors had arisen, and it was to

that point chiefly that the speaker alluded.

Of head cases several were seen, but only one was deserving of record. It was a very curious one, and was admirably managed by Dr. Gorman of Rutherglen, with whom Dr. Macleod saw the patient. A young man when skating collided violently with another. He was not thrown down, but received a contusion over his right orbit. He walked with aid to the bank, and very shortly became profoundly insensible. The same evening violent opisthotonos set in, and the attacks became very frequent. Next morning there were various attacks of episthotonos, alternating with the opisthotonos, and these came on in such rapid succession, and were so violent, that his death seemed imminent. Dr. Macleod saw him that day, and during his visit the patient was frequently attacked with opisthotonos of the most violent kind, and he also had fits of general tetanus. He was not deeply unconscious between the fits, but could not be wholly roused. His pupils were nearly normal and inactive. He had slight squint and facial paralysis. He voluntarily evacuated his bladder, and gave notice by his movements when his bowels were about to act. He slowly regained consciousness next day, and improved steadily for a week, when he had a violent relapse, which, though short, was as severe as the early seizure. From this, too, he recovered, but a fortnight afterwards, from slight excitement, was again seized with opisthotonos, which continued a whole night. After that he slowly but apparently completely recovered, and was now in perfect health.

Reference was next made to fractures in the neighbourhood of the ankle, and the mechanism by which they were produced. Dr. Macleod stated his belief that when the fibula was alone broken, it was usually by the foot being violently adducted,

and that this can be shown on the dead body, in which this fracture can be perfectly imitated. The external lateral ligament tears the bone, while the internal malleolus acts as a fulcrum, and the foot takes the part of a lever of the first power. When the same movement is carried to an extreme degree, then the internal malleolus is broken also, and this further injury Dr. Macleod believes is not infrequently secondary or subsequent to the breaking of the fibula alone, when the patient has tried to walk on the limb after the continuity of the fibula has been destroyed. If the fibula alone is broken, the foot readily resumes its position, and no deformity may mark the seat of fracture, and as the swelling may be slight, and there is no crepitation (unless sought for in an instructed manner), and possibly little or no loss of function, and as, moreover, the cause producing it may hardly seem adequate to produce a fracture, it is easy to comprehend how frequently a simple fracture of the external malleolus may be overlooked, or taken for a simple sprain. Reviewing the cases of this kind, which he had recently seen, Dr. Macleod found that, as a rule, the true nature of the injury is not recognized, and he went on to show how the distinction between it and sprain is to be made. When an adult comes down violently on the side of his foot, adducting it with some force, and immediately is conscious of pain a short way above the lower end of the fibula, limited to a spot, or, at least, most marked at a part which can generally be covered by the pulp of the forefinger, and increased by its pressure; when the discoloration begins at that spot, and appears shortly after the accident, and there is no special pain or swelling lower down below the malleolus, we may be very confident that the fibula is broken, even though we cannot make out crepitation or unnatural mobility, and the patient tells us he walked on his foot after the injury. If greater certainty is desirable, chloroform should be used, and then if the foot is grasped (the leg being held firmly) and moved from side to side (adducted and abducted), and the finger pressed over the suspected part, very likely crepitation and unnatural mobility will be developed. By alternately pressing with two fingers along the fibula, the same signs may possibly be made out.

Dr. Macleod next dwelt upon the distinctive deformity present in fracture of both malleoli and the other fractures near the ankle, and showed a splint which he employed to allow of passive motion during their treatment, and so the prevention of that rigidity of the articulation which is so troublesome a consequence of these injuries. The other methods of treatment were discussed, as was also the influence of position in the accurate "setting." When the internal malleolus was broken first, the foot was, Dr. Macleod thought, always abducted, and the fracture of the fibula was a secondary or consequitive effect produced by the excessive abduction, the foot acting as a lever, but in the reverse direction to that before described.

Fracture of the radius was next taken up, and many specimens recent and dry were exhibited. In one belonging to Dr. Allan, demonstrator of anatomy in the University, the usual displacement of the fragments was reversed. Having rapidly described the well known appearances of this accident, and the common method of treatment pursued, Dr. Macleod stated his astonishment and regret that the true nature of this injury was so often overlooked, and that the management was such as, in a large number of cases, to lead to most unsatisfactory results. Notwithstanding the large amount of literature which had been devoted to it, and the extreme frequency of the accident, it was yet the fact that cases constantly came to the hospital in which the fracture had been entirely overlooked, or in which it had been mistaken and treated erroneously. This fact, which the hospital register abundantly proved, was a valid reason for his bringing the subject before them, especially as he desired to suggest an explanation of the particular mechanism by which it is caused, and to recommend a mode of management different from that commonly followed.

The confusion so often made with dislocation of the carpus was traced to the great deformity, the kind of violence, the absence of crepitation, the fixity of the parts present in most cases; all of which suggest dislocation, and not fracture, to the inexperienced. The absence of deformity, crepitation, unnatural movement, and the retention of a certain amount of function in other cases of Colles' fracture, without displacement, was shown to be another cause of error, in that the injury was then taken for a simple sprain. The differential diagnosis of these accidents was pointed out, especially by the extension of the hand on the forearm, so as to make the point of fracture apparent. The importance of remembering that dislocation of the carpus is an accident so rare that almost no surgeon of experience has ever seen it, though many of little experience see it frequently, was carefully brought out, as showing how the whole question of dislocation at this joint might be dismissed from our minds when dealing with these accidents. Dr. Macleod next showed the arm of an elderly female in which he had, a few days after death, produced

fracture of the radius at the usual place, and followed by the usual deformity, by rapid extension of the hand, the mechanism by which he believes this fracture is always caused. The bone, he thought, was broken by the action of the anterior carporadial ligament which, in extension, is put rapidly and violently on the stretch. Dr. Macleod was of opinion that if an adult, and above all an elderly female, falls with violence on the "hilt" of the hand, and there is loss of function, pain at a limited point a short way above the styloid process of the radius, and possibly below the styloid process of the ulna, even though there be no deformity or crepitation (which is very seldom discernible in any case), we will seldom be wrong in deciding it to be a Colles' fracture, and that as regards its being a dislocation, when there is much deformity, we may rest content it is not that, though it is not necessarily fracture of the radius alone, but may be fracture of both bones of the forearm low down. In most cases, however, even in these circumstances, it is a Colles'.

Much pains were taken to impress on the members of the Society the importance of early and careful setting in Colles' fracture with displacement, and the advantage of using short, carefully fitting poro-plastic splints of a special pattern, which allowed of early movement of both fingers and wrist joint. The fingers were allowed movement from the first, and the wrist joint after a fortnight. The surgeon was advised to see to this movement himself, as being essential to the early

restoration of the parts.

Dr. Macleod next took up injuries in the neighbourhood of the hip joint, and related several he had lately seen in which, after falls, confusing symptoms as bearing on the diagnosis had been found, and he described various modes of measurement from the trochanter major which would, if attended to, obviate error. The employment of chloroform, in their examination, was strongly advocated, and the early use of passive motion in all cases (with due precautions to fix the fragments if there was fracture) in which an articulation had to be maintained enclosed in splints for any length of time. Splints intended to fulfil this indication for the elbow, wrist, and ankle were shown.

Dr. Alexander Robertson said that he was present when Dr. Macleod had made the experiment in the Town's Hospital, and was struck with the ease with which he produced the fracture, by the exertion of no great force.

Mr. James A. Adams said that he had been rather struck with the specimen shown of Colles' fracture, in which the dis-

placement was forward. As to the position of the thumb, they would observe that the extensor tendons had slipped round to the front, and had really become flexors. Wagstaff had probably attributed too much importance to the interosseous membrane in the causation of the fracture.

Dr. Morton said that many of the points touched on in the paper must have been familiar to most of them. He had seen some cases of Colles' fracture during the late frost. In one—that of a boy—there was great deformity, and very considerable displacement; while in another case—that of a lady—there was no displacement whatever, though the evidence of fracture was distinct enough. The only thing required in the latter case was rest, while the other required some care and art in the treatment. Yet the boy was quite well in about three weeks, and the lady was still, after an interval of six weeks, as helpless as at first, and it would probably be some time yet before she could have any use of the limb. She was a person

of feeble digestion and flabby tissues.

Dr. Cameron said he was much interested in Dr. Macleod's communication, but there were one or two statements which had caused him surprise. Notably was this the fact with the description of "Pott's fracture." Dr. Macleod reserved this name for fracture of the fibula complicated with fracture of the internal malleolus; and excluded all cases in which this complication was absent. Now, this was quite unjustifiable, since the well known description and woodcut in Pott's works (referred to by Dupuytren and all subsequent writers on the subject, and giving rise to the association of the fracture with Pott's name in British writings) referred to a fracture of the fibula, with eversion of the foot and rupture of the internal lateral ligament. It would not, therefore, do to refuse to apply the name of "Pott's fracture" to the only form of the injury in question described by Pott. If one variety of it alone were entitled to the name it was that, in fact, in which no fracture existed at the inner side of the ankle, but a rupture of the deltoid ligament. The truth was, however, that it was quite a matter of chance which of these injuries fracture or ligamentous rupture—occurred in any given case. All depended upon whether the apophysis or the ligament proved the stronger, as the strain fell upon both.

Dr. Foulis said that in one of the specimens exhibited he had dissected all the muscles. He found the pronator quadratus and the supinator longus to have had no effect in displacing the bone. The only muscles left which could act upon the fracture were the flexors of the carpus and of the thumb.

As to the question of muscular action in displacing bones generally, he had seen a great many fractures from injuries, and had dissected the attachments of the bones. Though the whole muscles were cut, the deformity remained just as it was. It was due to the periosteum and the ligaments, and possibly to the connective tissue in the vicinity. As to the question of the breaking of the tip of the ulna, it was rather curious that in all the specimens shown to-night this fracture had occurred. In regard to the treatment of Colles' fracture, he had had two cases during the frost, in which he put on Gooch splints, reaching to the palm, so as to allow the movement of the fingers, with excellent results.

Mr. William J. Adam said that, as regarded the employment of passive motion, he had seen it used in the Western Infirmary in twelve cases of paralysis of the extensors of the forearm. In two of these cases there was distinct anchylosis of the metacarpal bones. In a third there was stiffness of the

shoulder joint.

Dr. Macleod, in reply, said that no doubt the description given in Pott's work, and referred to by Dupuytren, of the injury in question did not mention fracture of the internal malleolus. But the description was not written by Pott himself, but by some of his pupils, just in the same way as the works attributed to Dupuytren were not written by that surgeon himself, but by his pupils. Dr. Cameron would find, on referring to the text books, that the name "Potts' fracture" was generally used to define the injury he had described. In regard to the other point spoken to, of the fracture of the styloid process of the ulna, the proportion of times in which it occurred was rather a point of curious than of practical interest. The point could not be verified till after death, and it was rare to get a dissection.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Session 1878–79.
Meeting V.—March 11th, 1879.

ALEXANDER ROBERTSON, M.D., President, in the Chair.

DISCUSSION ON TREATMENT OF INTERNAL ANEURISM.

This discussion was attended by a large number of medical men invited by the Society. As a full report appeared in the British Medical Journal for 5th April, we do not propose here to give more than a sketch of the opinions of the various speakers, confining ourselves mainly to the more directly

practical points.

Dr. M'Call Anderson opened the discussion, and referred to three methods of treatment—Tufnell's, that by iodide of potassium, and that by galvano-puncture. A case was narrated in which, by a modification of Tufnell's plan, great benefit had resulted. In regard to iodide of potassium, he acknowledged that it often relieved pain and uneasiness in a remarkable way, but he scarcely agreed with the high praise which Dr. Balfour had accorded to this treatment in his work on Diseases of the Heart and Aorta. Dr. Anderson narrated two cases of thoracic aneurism treated successfully by galvano-puncture,

one of the cases being shown in a side room.

Dr. John Duncan, of Edinburgh, was next called on to He referred chiefly to his own experience with galvano-puncture or electrolysis. He used this treatment in three classes of cases; first, where death was imminent from external hamorrhage, there being a gangrenous portion of skin over the prominent tumour; second, where there was an extra-thoracic tumour of some size, and progressing in spite of treatment by Tufnell's method and iodide of potassium; third, where there was an intra-thoracic tumour, which resisted the action of other remedies. In the last class of cases, some of the Italian surgeons had met with great success. Dr. Duncan proceeded to speak of the mode of operating, insisting specially

on the proper insulation of the needles used.

Dr. George W. Balfour, Edinburgh, was the next speaker, and he referred to the large experience he had acquired in the treatment by iodide of potassium, during the last twelve years. The first thing that struck him was the very remarkable reduction of the intra-arterial blood pressure, which is of great importance, as it allows other favourable circumstances to come into play. During the use of the iodide the patient is confined to bed, at least at first, so as still further to reduce the blood pressure by diminishing the rate and force of the contractions of the heart. The diet of the patient does not vary from that of health, except in so far as the confinement to bed may call for modification. The dose of the drug varies according to constitution and weight, but Dr. Balfour is in the habit of beginning with 20 grains three times a day, increasing up to as much as a drachm. He always stipulates that the patient should spend six months in bed, but many of his most successful cases have taken a much longer time before marked

improvement has set in. All persons with aneurism must

remain throughout life absolute teetotallers.

Dr. Byrom Bramwell, of Newcastle, spoke very favourably of the treatment by iodide of potassium, and he read a letter from Dr. Walshe in which he expressed himself as highly

gratified with the treatment.

Dr. Alexander Robertson related two cases in which he had used electrolysis. Dr. David Foulis also narrated a case in which there had been considerable hæmorrhage from the needle puncture. Dr. Robert Perry said there were cases in which each kind of treatment was the best. In the earlier stages he had been very successful with iodide of potassium, along with rest and a somewhat restricted diet. Dr. G. H. B. Macleod spoke in favour of larger doses of iodide of potassium than were now customary, especially in syphilis.

Dr. Gairdner invited any who were present to see the application of electrolysis in a case in the Western Infirmary

next morning.

GLASGOW SOUTHERN MEDICAL SOCIETY.

Session 1878–79. MEETING VII.—JAN. 9th, 1879.

Dr. P. Stewart, President, in the Chair.

DR. JAMES DUNLOP read, and afterwards presented to the Society, the following letter BY THE LATE SIR ASTLEY COOPER to Mr. Selwyn, Surgeon, Ledbury.

"My dear Sir,—I have tapped this hydrocele, and discharged about a quarter of a pint of water, or rather more. The plan

I wish to be pursued is to apply—

Liq. Ammoniæ Acet., 3vss. Aq. Lavandul, Ammon. Mur., m. ft. Lotio.—for a month.

I am,

Yours truly,

ASTLEY COOPER.

"If the water returns, ye radical cure by injection will be required.

A. C."

Dr. Dunlop showed—1. Three specimens of tape-worm (Tænia Solium), which he had removed from the bodies of three different persons at post mortem examination. The fact of most interest in connection with these was that the parasites had their attachment, in all three cases, at exactly the same point, a few inches below the pylorus. 2. A PORTION OF THE INTESTINE, and of the abdominal wall, of a man who had died from the effects of a stab. The wound in the bowel had been closed by catgut stitches; intestinal contents, however, had leaked through one of the stitch holes, causing peritonitis and the patient's death. One of the stitches, also, had entirely dis-

appeared.

Mr. J. S. Nairne showed—1. A PORTION OF THE LARGE IN-TESTINE OF A PATIENT, IN WHICH RUPTURE had taken place immediately below an impermeable organic stricture, when an endeavour was being made to overcome the obstruction by injecting large quantities of fluid through an O'Beirne's tube. Mr. Nairne also gave the results of some experiments he had performed on the dead body. He found that while of course the bowel could be torn by introducing the enema-tube with considerable violence, no complete rupture occurs if the tube be introduced with gentle continuous pressure; in the latter case, the outer coat of the bowel is indeed ruptured, but the mucous membrane and outer muscular coat remain intact, and the point of the tube turns back towards the anus. After the outer coats of the bowel have given way, however, the injection of fluid at once completes the rupture. 2. Two enormous GREAT-TOE-NAILS which, before removal, had rendered the patient quite lame, as they had curved down in front, like claws, reaching the lower surface of the toe. On the under surface of one of them was a strong growth of hairs, or rather bristles. 3. THE UTERUS AND OVARIES from a case of supposed tubal pregnancy, in which the sac had burst, causing peritonitis and death.

MEETING VIII.—20TH FEB., 1879.

Dr. Niven, Vice-President, in the Chair.

DR. PARK read a paper on DISEASES IN WHICH MORPHIA HYPO-DERMICALLY HAS BEEN USED WITH SUCCESS. In those painful diseases, of which neuralgia is the type, a single injection often cures in the real sense of the word. In some cases it is merely palliative, but even then, when frequently repeated it often No. 5. Vol. XI. proves curative. When practised systematically it is best to give a stimulant previously, to lessen the immediate unpleasant effects, and to aid the action of the drug. In inflammations large doses are well borne. In pneumonia it relieves the pain and diminishes the number of respirations, while the affection may sometimes be cut short by combining with the morphia a small dose of veratrum viride. It is the best remedy for pleurodynia, lumbago, and colic of all kinds. It is invaluable in dyspnæa, particularly that dependent on cardiac disease; it moderates the heart's action, lowers the number of respirations, soothes the nervous centres, while the congested lungs are relieved and enabled to perform their functions. Contrary to the belief of some, that it is suitable only in mitral disease and hurtful in aortic disease, Dr. Park has found it beneficial in all varieties of cardiac affection, provided there were no degeneration of the substance of the heart. In asthma it is best given in conjunction with atropine; here the relaxation of spasm is in no way due to the induction of nausea. thoracic aneurism and irritative dyspepsia it is of the greatest use; in chorea, also, it may be given, but in small doses. In hysteria it should be used with great reserve, and only in emergency. In cholera, even in the stage of collapse, it often seems to rescue the patient from the very jaws of death. Dr. Park then gave his experience of morphia subcutaneously in the treatment of Bright's disease, with the report of a case in which it was used not only without danger but with positive safety and benefit, the turbulent action of the heart, pain in the cardiac region, and orthopnœa being all immensely relieved. Its action in such a case is very different from that of morphia given by the mouth, its most marked influence being directed chiefly to the nervous system; it does not disturb digestion, and but very slightly modifies the secretions, that of the skin being somewhat increased, that of the kidneys being diminished, while that of the intestine is usually not interfered with, occasionally, indeed, it proves laxative to the bowels. In mania he had used morphia subcutaneously in very large doses; in one case, complicated at the start with delirium tremens, he had given five grains with the best results, the physiological effects of the drug being then developed to but a slight extent. In a very marked case of exophthalmic goitre the injection of morphia, continued over a period of two years, was followed by a complete cure; the extreme rapidity of the heart's action and the dyspnæa, both of which symptoms Dr. Park referred to pressure on the vagus, were markedly diminished. Dr. M'Millan entered a most energetic protest against

the use of morphia in such doses as those mentioned by Dr. Park.

Dr. Napier also confessed himself startled by Dr. Park's heroic treatment of delirium tremens; he would class that method of treatment with Jones' (large doses of digitalis), and would carefully avoid both so long as the same results could be obtained by much less dangerous means, as by chloral or bromide of potassium. In colic, lumbago, and neuralgia generally, he had found morphia subcutaneously of great service; combined with atropine it was useful in checking the night sweats of phthisis. He further took exception to Dr. Park's view of the pathology of Graves' disease, holding that the pneumogastric nerve is unaffected, or involved only secondarily, and that the primary lesion is in connection with the sympathetic.

Dr. Hall, while advocating caution in the use of the hypodermic syringe, stated that in one case of delirum tremens he had administered three grains subcutaneously, with safety and

success.

Dr. W. Forrest would have liked to know the after-history of Dr. Park's cases of delirium tremens and mania, as he believed that such treatment is not only dangerous at the

time, but is apt to leave unpleasant after-effects.

In the course of a discussion which followed on the treatment of delirium tremens, those present were nearly unanimous in condemning large doses of opiates; they considered that the use of chloral was frequently attended by risk, and that the best results were usually to be got from small doses of morphia by the mouth, combined with carbonate of ammonia and bromide of potassium.

MEDICAL ITEMS.

UNDER THE DIRECTION OF

ALEX. NAPIER, M.D.

Allen's Method in Dislocations of the Hip.—As long ago as 1841, Dr. S. J. Allen, of White River Junction, Vermont, hit upon a very simple method of reducing dislocations of the hip. The words in which he describes his mode of procedure are these:—"After the patient was fully chloroformed, the muscles being thoroughly relaxed, I stepped upon the bed, flexed the leg upon the thigh, and the thigh at right angles with the

body, and, placing his foot between my legs and my hand beneath the bend of his knee, I lifted the hips well from the bed, and held them immovably in that position less than half a minute, when the head of the thigh bone returned into the socket with a sensible and audible shock." All Dr. Allen's cases seem to have been dislocations upon the dorsum ilii; that of which the details are here given was a displacement into the ischiatic notch, showing, as far as it goes, that the new method is as well adapted to a lodgment of the bone below the tendon of the obturator internus, as above it. The patient, a boy of nearly 5 years of age, had been run over by a loaded horse waggon, which fractured the left femur a little above the middle of the shaft, and, at the same time, forced the head of the bone out of its socket into the ischiatic notch, or upon the sacro-sciatic ligament. Chloroform having been given, Dr. A. F. Kinne, from whose paper we quote, passed his right hand from within outwards under the knee of the affected limb, and easily drew the head of the femur upwards into the sciatic notch, making the displacement simply ischiatic, or dorsal below the tendon. Continuing the same procedure, the thigh was raised perpendicular to the body, and the leg held at right angles to the thigh, in a line parallel with the axis of the body, and gentle extension was made upwards. In less than half a minute, before force enough had been used to raise the child's hips from the bed, the superior extremity of the bone began to glide upwards, the pelvis at the same time rotating outwards, and, as soon as abduction enough had been in this way indirectly secured, it rotated sharply into the acetabulum. Thus, an ischiatic luxation of the hip was, in a few seconds, reduced with one hand. The fracture was then put up in the usual way.—Detroit Lancet, March, 1879.

Complete Outward Dislocation of the Forearm.—A case of this "excessively rare" injury is recorded in the Med. and Surg. Reporter, 23nd March, 1879. The dislocation, which took place in 1862, seventeen years ago, was the result of direct violence. No attempt at reduction was ever made; the patient simply carried his arm in a sling. At the end of two months he commenced using it a little, and in about two years his arm was so far recovered as to permit him to return to his sailor life. Present condition: The inner border of the olecranon process rests upon the external border of the humerus, 2 inches above the external condyle; external to this is the head of the radius. The internal condyle of the humerus projects nearly 2 inches from the inner surface of the

forearm. This extremity is about three inches shorter than its fellow, measuring from the tip of the acromion to the styloid process of the radius, and the forearm is nearly 3 inches shorter than the opposite one, measuring from the internal condyle to the pisiform bone. The patient has full control of this limb, can flex or extend, pronate or supinate it as easily as the other arm, and he thinks it is in every particular as serviceable as the other.

Importance of the Abdominal Muscles in Parturition. —This is well exemplified in a case reported by Dr. E. J. Jel. The patient was attended by a midwife during the first stages of her labour. During a protracted pain there was a tearing sensation, after which no forcible expulsive efforts could be made. When the medical attendant arrived, the patient had been in labour eight hours. The head presented in the first position high up in the pelvis, the vertex being directed towards the sacrum. Delivery was effected with the forceps, when it was found that the recti had separated at the linea alba for 4 inches above and 3 inches below the umbilicus. Eighteen months later, Dr. J. attended the woman in her next confinement (the fourth). He found her in the same condition as when called the first time, the uterine contractions being insufficient to even force the child into the inlet of the pelvis. He again delivered with forceps without difficulty.—(Med. and Surg. Brief.) Detroit Lancet, March, 1879.

Unusual Termination of a Tubal Pregnancy.—Mrs. A., 29, delivered seven years ago of a fully developed child in the Glasgow Lying-in Hospital, again became pregnant early in June, 1878. Several times during the summer there was a slight discharge of blood from the vagina. On the night of 15th September she was awakened by the occurrence of very profuse hemorrhage, which returned next day, accompanied by considerable "gnawing" pain in the left side. On examination it was found that the cervix was long, hard, and high up in the back part of the vagina; the external os was closed: the uterus was slightly anteverted, sensitive, and freely movable. A sound passed readily, and without any force, through the internal os to the fundus, the uterine cavity measuring barely 3 inches. In the left pelvis was a tense elastic tumour, about 5 inches long and pisiform in shape, joined to the uterus at an angle of about 100°, and separated from it by a distinct depression or sulcus. The tumour was not tender or painful, except under manipulation; it was obscurely fluctuant, but

attempts to obtain the sensation of ballottement were unsuccessful. Tubal pregnancy was thus diagnosed. On the morning of the 20th, after the patient had suffered for about twelve hours from agonizing pain, which, at first, occurred in irregular paroxysms, but subsequently was rhythmical in its return, a large mass of clotted blood was expelled from the vagina, followed in about two hours by a feetus measuring 3 inches from vertex to extremity of nates. The internal os, which had previously dilated to a slight degree, was not found contracted, and the tumour which had occupied the left pelvis had disappeared. The placenta was retained for a short time, but was eventually hooked out with the finger; in removing it the finger was run several times over the inner surface of the womb, on which no roughness or inequality could be felt. The patient made a slow recovery, suffering considerably from rather severe endometritis. Dr. C. Williams, who reports the case, is of opinion that the left Fallopian tube had been in the condition of a chronic salpingitis, with thickening of its walls and some enlargement of its calibre, anterior to the fructification of the ovum, which either emanated from the left ovary and failed to reach the uterus, or descended from the right tube and ascended or fell into the left, and there became attached. There existing already a hypertrophy of the muscular walls of the tube, it was all the more fitted for rapid development, and finally to contract on its contents in the same rythmic manner as would the uterus, and expel them. The author concludes by referring to several recorded cases more or less similar to the foregoing .- New York Med. Journal. December, 1878.

Strong Coffee as a Remedy for Metrorrhagia.—Dr. A. Després finds that café noir, taken to the extent of six cups per day, very frequently arrests uterine hæmorrhage when other means have failed. He gives three cases in which this treatment was followed by very satisfactory results. In the first of these the bleeding was consequent on a miscarriage; the second and third were cases of simple menorrhagia, combined with profound anemia. The author suggests that the caffeine, besides accelerating the heart's action, has a special influence on the muscular tissue of the uterus, like that of ergot.—Bull. Générale de Therap. 15th March, 1879.

Chloral in Sick Headache.—We have, according to Dr. Seure, in chloral, administered in injection, in doses of 15-45 grains, an infallible means of arresting attacks of sick head-

ache. The chloral seems to be absorbed almost instantaneously by the rectum, as, in the course of a few seconds after it is thrown in, its peculiar taste is felt at the back of the mouth; a sense of numbness then pervades the whole system, the headache disappears by degrees, vomiting ceases, and in about half an hour the seizure is practically at an end. A table spoonful of brandy added to the injection sometimes quickens its action. If the chloral be dissolved in lukewarm milk, or mixed in the beaten-up yolk of an egg, it has less tendency to cause smarting in the rectum—the only inconvenience connected with this method of treatment. For those who have any difficulty in retaining injections, the amount of fluid should be made as small as possible, and a few drops of laudanum may be added to it.—Bul. Générale de Therap. 30th October, 1878.

Chloral as an Anæsthetic in Children.—Dr. Redier advocates strongly the employment of chloral as an anæsthetic in operations on children. The following are the conclusions to which he comes:—1. Chloral, in sufficient doses, invariably produces, in children, a condition of profound sleep, more or less closely allied to anæsthesia. 2. In anæsthetic doses (30-60 grains) it is followed by no bad results. In only one case (that of a child, 5 years of age, who had taken 5 grammes=77 grains), which occurred in Belgium, has death taken place. The doses which seem necessary to produce anæsthesia are, in children from 2-4 years, 30 grains; from 4-8, 46 grains; from 8-12, 61 grains. The whole quantity is to be taken at once, on an empty stomach. 3. Sleep comes on very rapidly, as a rule, though marked differences in this respect are observed. The operation may generally be proceeded with in an hour or an hour and a half. Sleep lasts on an average about five hours, respiration and circulation during this time being normal. 4. There are no bad after-effects. This method of producing unconsciousness may be employed with advantage, not only in short operations, but also in those of considerable duration—the extraction of teeth, destruction of erectile tumours, opening of abscesses, and the prolonged application of caustics.—(Jour. d. Sc. Med. de Lille.) Lyon Médical. 29th December, 1878.

Physiological Actions of Aconite and Aconitia.—Dr. G. H. Mackenzie thus summarizes the results of a series of thirty-seven experiments on this subject:—

1. Aconite and aconitia act primarily on the respiration by

their influence on the respiratory centre and peripheral sensory branches of the vagus.

2. They have no direct action on the heart, and only affect that viscus secondarily, through the medium of the lungs.

3. Their action on the nervous system consists in, firstly, irritating, and, secondly, paralysing the peripheral sensory nerves and posterior roots of the spinal nerves. They have no direct action on the brain or the vaso-motor nerves. They increase the irritability of the peripheral motor nerves, and of the motor nerves of the cord.

4. They do not induce muscular paralysis, but, on the con-

trary, increase the irritability of voluntary muscle.

5. They induce convulsions mainly through their augmenting the irritability of the anterior column of the cord, the motor nerves, and muscles.

6. They firstly increase, and secondly diminish temperature.

7. Death ensues from asphyxia and respiratory collapse.—
The Practitioner. March, 1879.

New Method of Controlling Hæmorrhage in Amputation at the Hip.—Dr. B. Wills Richardson has recently performed amputation at the hip joint in a girl of 8, for extensive caries of the bones of the foot, leg, and thigh. The point of greatest interest in the description which we have of the operation in the Med. Press and Circular, 9th April, 1879, is the manner in which the bleeding was controlled. Davy's wooden lever, for compressing the common iliac artery, was employed, an instrument which Dr. R. finds so simple and efficient that he recommends it in preference to Lister's abdominal compressor, as "capable of rendering amputation at the hip one of the most bloodless capital operations in surgery." It was used in this way:—The rectum being empty, 2 ounces of olive oil were thrown in; the lever (a simple boxwood rod, about 22 inches long, and a little enlarged at each end) was then oiled and carefully introduced through the anus into the rectum till it was felt above the brim of the true pelvis, by pressing on the abdominal walls. An Esmarch's bandage, which had been previously applied to the whole limb, was then unwound. As this was being done the protruding end of the lever was brought forward, making a fulcrum of the perinaum, thereby throwing the other end backward, and compressing the common iliac artery in the groove between the bodies of the lumbar vertebræ and the psoas magnus muscle. So perfect was the control of the artery that at the very utmost not more than 2 ounces of blood were lost.

How to Avoid Leaving Scars.—Dr. J. H. Packard, in an address on "Some Surgical Wrinkles," shows how to do this. His method is simply to cut through the skin obliquely. He first tried the experiment in cutting upon a tumour in the thigh, holding the knife so as to divide the skin in the sloping, shelving manner described. The wound united perfectly, and, after it had healed, he actually could not find the line of incision. In operations on exposed parts, as on the hands and face, such a result is extremely desirable.—Pacific Med. and Surg. Journal. March, 1879.

Wound of Heart and Aorta—Temporary Recovery.— An interesting case of pistol shot wound, in which the bullet penetrated the right ventricle, septum, and aorta, without causing death at the time, is described in the Med. and Surg. Reporter for 1st March, 1879. On being shot, the patient fell into a state of collapse, but shortly revived, complaining only of slight dyspnæa and pain in the side. In a fortnight he was sufficiently well to resume his work, and continued at it till the fifty-fourth day from receipt of the injury, when he suddenly died. Post mortem examination.—" A small cicatrix was seen near the nipple, and, on opening the thorax, a similar cicatrix existed in the upper lobe of the left lung. The left pleura was found distended with blood, which had escaped through an opening in the pericardium. This opening measured one-fourth of an inch. Opposite the perforation of the pericardium, and on the anterior surface of the right ventricle, a small aneurismal sac was found ruptured. A probe introduced through the rent passed into the ventricle. On making a section of the heart the ball was found behind the pillars of the columnæ The course of the ball in the heart was that of a direct line, passing through the right ventricle, upper portion of septum and contiguous semilunar surface, aorta, and becoming spent in the left auricle, then dropping into the right (left?) ventricle."

Treatment of Hiccup.—We have here narrated, by Dr. E. Barré, the case of a man, 45 years of age, of exceedingly nervous temperament, who suffered from severe and continual hiccup, brought on by grief connected with the loss of his daughter. All the ordinary remedies—ether, bromide of potassium, morphia subcutaneously, valerianate of zinc, baths and hydrotherapeutic resources generally, chloroform, quinine, iron,

&c., even the method of epigastric compression so much recommended of late—were tried one after the other, but with no success. At length it struck Dr. B. one day to pass an æsophageal bougie into the stomach. Next day the patient stated that the hiccup had greatly diminished in intensity, and had attacked him only three times in the preceding twenty-four hours. The bougie was accordingly passed again, and from that day all trace of the affection, which had lasted for two years, disappeared.—(Un. Med. de Paris). Lyon Médical, 6th April, 1879. Another very simple remedy for this complaint, stated on the authority of Dr. Grellety to be unfailing in its action, is mentioned in the same journal (22nd December, 1878). A piece of loaf sugar soaked in ordinary table vinegar stops hiccup "as if by enchantment."

A Case of Hydrophobia Cured by Oxygen.—Two Russian physicians, Drs. Schmidt and Lebeden, have had under their care a little girl, aged 12, who was bitten on the hand by a mad dog. The wound, which extended to the subcutaneous tissue, was cauterized immediately with nitrate of silver, and, at the end of eight days, cicatrisation was complete. Seventeen days after having been bitten, the first symptoms of hydrophobia appeared; the inhalation of 3 cubic feet of oxygen was prescribed, the result being that in two hours and a half the patient was resting quietly and perfectly Two days later, however, new symptoms set innotably, dysphagia, dyspnæa, and tonic contractions of the trunk and extremities. The inhalation of oxygen was repeated and continued for forty-five minutes, when the symptoms disappeared. A slight amount of dyspnæa alone remained, which was controlled, however, by the monobromide of camphor. A month later some feebleness of the lower limbs was observed, but this soon disappeared. It is noted further that in 1875 Drs. Constantin Paul and Josias adopted this treatment in a similar case, in which the asphyxia was relieved so as to admit of other treatment being kept up, but ultimately the patient succumbed.—(Journal d'hygiène.) Gazette des Hôpitaux. 15th March, 1879.—J. W. A.

A Caution in regard to the use of Lead Collyria.— In a recent number of the *Gazette des Hôpitaux*, there appeared a short paper on the danger of employing lead collyria in cases complicated by ulceration of the cornea. That the lead in

these circumstances is apt to be deposited on the ulcerated surface is well known, but in the same journal of 18th March, 1879, Dr. Manouvriez of Valenciennes, directs attention to another danger which is of somewhat unusual occurrence, we imagine, and certainly worth recording. In the spring of 1878 he was called to see a little girl, 7 years of age, who presented well marked symptoms of lead poisoning, evidently due to the prolonged use of a collyrium of subacetate of lead, which had been continued over a period of three and a half years. was suffering from persistent colic and vomiting, accompanied by choreic movements (tremor saturninus); there was also the typical blue line on the gums. The first symptoms had reference to the eye itself; a peculiar derangement of accommodation (such as Stelwag describes in general saturnism), mydriasis, some congestion of the optic nerve, ptosis and anæsthesia of the eyelids, and a considerable alteration in the expression generally. The skin of the whole orbital region was of a greyish tint, and could be stained black by a sulphurous solution, and yellow by iodide of potassium; the greyish background and the stains referred to alike disappeared on the application of a solution of hypochlorite of soda. lotion having been stopped, iodide of potassium and sulphurous baths were ordered, and now the patient is almost well again. The eyesight is rapidly improving.—J. W. A.

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ORIGINAL ARTICLES.

NOTE ON THE SPECTROSCOPIC EXAMINATION OF THE URINE, IN TWO CASES OF PAROXYSMAL HÆMATINURIA.

By R. W. FORREST M.D., AND JAMES FINLAYSON M.D.

In his admirable account of the history of "Paroxysmal Hæmaturia," Dr. Wickham Legg* states that hæmoglobin was shown to be present in the urine, when subjected to spectroscopic examination. Indeed, this is now so generally recognized that the name "periodic hæmoglobinuria" + is applied by some to this affection. It seemed desirable to follow up this method of spectrum analysis, to see what light could be obtained as to the form in which the blood was present in such cases. The two typical cases under our care, of which an account is given in this number of the Journal, were not under the continuous supervision to which in-door patients can be subjected, and this must form our excuse for the somewhat imperfect results of our observations. samples of urine in the two cases were examined independently by us, and also jointly, and as the results were essentially the same in both, they may be stated together.

^{*} J. Wickham Legg, M.D., "On Paroxysmal Hæmaturia." St. Bartholomew's Hospital Reports. Vol. x. London, 1874.

[†]Lichtheim: "Ueber Periodische Hämoglobinurie." Volkmann's Sammlung Klinischer Vortrüge, No. 134. Leipzig, 1878. See also leading article in Medical Times and Gazette, giving an account of this lecture, 15th February, 1879.

In the first instance, it seemed as if our specimens simply contained oxy-hæmoglobin,* as the examination showed only the two well known absorption bands, between the orange and green portions of the spectrum. (See No. 2 in diagram.) These

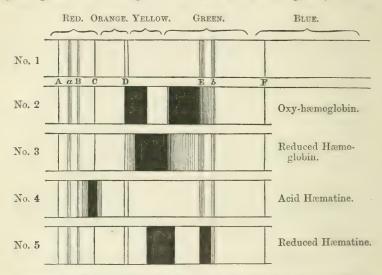


Diagram showing the position of the Fraunhofer lines in the solar spectrum (No.1): and the absorption bands of Hæmoglobin and Hæmatine (Nos. 2 to 5.)

specimens, however, had become somewhat old before we had examined them in this way, and, on procuring fresh specimens from both patients in their next attacks, the bloody urine showed, in addition to these two well known bands of oxy-hæmoglobin, a third somewhat narrow absorption band, about the middle of the red in the spectrum. † On keeping the specimens, it was found that the absorption band in the red disappeared spontaneously, and, on adding ammonia to those specimens in which the band in the red was still visible, we found that this reagent caused it to disappear; it seemed probable, therefore, that the spontaneous disappearance of the

*This substance is the same as that described under the names of "Scarlet Cruorine" and "Oxy-Hamatocrystalline."

[†] Our observations were made with pocket spectroscopes, one of which, however, was fitted with a scale for measuring the position of the bands. To check the correctness of the measurements, Mr. Ramsay measured the bands at the Chemical Laboratory of the University, with a larger instrument, and noted the band in the red as from 88 to 92, and the other two from 102 to 109 and 116 to 124—the D line being 102, and the E line 125.

band in the red was connected with the ordinary ammoniacal

changes which occur in urine.

The question remained, What was the cause of the three absorption bands in recent specimens? The two bands between the orange and green, found both in the old and in the recent specimens, seemed to correspond perfectly to those of oxy-hæmoglobin, both as to their exact position between the D and E lines of the spectrum, and also as to their relative breadth, and their relative intensity. On subjecting the specimen to reducing agents (we used ammonium sulphide), we found the beautiful reactions described by Professor Stokes.* The two bands of oxy-hæmoglobin became converted into one in an altered position (see No. 3 in the diagram). On shaking up the fluid with the air in the test tube, the hæmoglobin was again oxidized, and showed the two bands as before; and these, after a little time, again gave place to the single band of reduced hæmoglobin. + This further reaction seemed thus to leave no doubt that oxyhæmoglobin was present in the urine.

On comparing the absorption band in the red, with the spectra of a set of Browning's samples of blood products, and with the various diagrams published on the subject, one could not fail to be struck with the resemblance of this band near the C line to that given by hæmatine in acid solution. ‡ (See No. 4 in the diagram.) An absorption band in this situation has been described as having been found in certain specimens of bloody urine in which blood corpuscles could not be detected by the microscope, and Neubauer and Vogel, in their well known book on the Urine, describe this spectroscopic appearance as due to the presence of metahæmoglobin. § Guttmann, || likewise, gives this reaction of one absorption band between C and D, as characteristic of metahæmoglobin in bloody urine.

^{*}G. G. Stokes "On the Reduction and Oxidation of the Colouring Matter of the Blood." Proceedings of the Royal Society. Vol. xiii. London, 1864. + Or "Purple Cruorine," "Reduced Hæmatocrystalline," &c. Some

⁺ Or "Purple Cruorine," "Reduced Hæmatocrystalline," &c. Some writers name this "Methæmoglobin" (see Lochisch, Anleitung zur Harn-Analyse. Wien, 1878, p. 172), but this is a very bad name for it, especially as it has been applied to a substance giving perfectly different reactions, as will be shown immediately.

[‡] Sometimes, indeed, the spectrum of this substance is represented as giving 3, or even 4 or 5 absorption bands, but the band in the red is the only one generally given by authorities, the others requiring special care or arrangements for their demonstration.

Page 165 in the second French edition, translated from the seventh

German edition. Paris, 1877.

Guttmann: Lehrbuch der Klinischen Untersuchungs-Methoden für die Brust-und Unterleibs-Organe. 3 Aufl. Berlin, 1878, page 389.

In this view, the specimens from our two patients now under consideration would be regarded as containing a mixture of oxy-hemoglobin and metahemoglobin, and the appearances actually found by us resemble those produced, by adding together the bands in No. 2 and No. 4 of our diagram.

But the question as to what metahæmoglobin really is cannot be easily answered. So far as it has been described, it is admitted to have the spectroscopic characters of hæmatine in acid solution, * but its very existence, as a separate entity, seems doubtful +; and its reactions may be due to the decomposition of hæmoglobin into albuminous matter and hæmatine.

This seems to be the view of Thudichum, who describes the spectroscopic appearances found in the urine of a patient affected with paroxysmal hæmatinuria. He found the absorption bands characteristic of oxy-hæmoglobin and acid hæmatine. He says that his observations "were the first instance in which hæmatine, hitherto known as an art product of the laboratory only, has been proved to be present in an organic morbid fluid, as the product of the diseased process itself." †. In connection with this remark, however, it should be stated that in one of the early cases of this affection reported by Gull, § there were myriads of minute crystals of hæmatine, but such crystals do not seem to have been found by subsequent observers.

It is not, however, quite clear that this band in the red portion of the spectrum is really due to hæmatine, for even in Thudichum's case he admits that the behaviour with reducing and oxidizing agents was not such as we might expect to have in dealing with hæmatine. In our cases the influence of ammonium sulphide was simply to produce the band of reduced hæmoglobin, which, on agitation with air, gave rise to the two bands of oxy-hæmoglobin as already described. On treating the urine with acids, after boiling, the characteristic band of hæmatine was obtained in the red part of the spectrum, and this could be reduced by ammonium sulphide, so as to give the

^{*} See Watts' Dictionary of Chemistry, Supplement I, Art. "Metahamo-globin," and Hoppe-Scyler, Handbuch der Physiologisch und Pathologisch-Chemischen Analyse. Vierte Aufl. Berlin, 1875. Pp. 256, 257.

Chemischen Analyse. Vierte Aufl. Berlin, 1875. Pp. 256, 257.
† Hoppe-Seyler loc. cit.: also Art. "Sang." Dict. Encyc. des Sciences Médicules. 3 Ser. Tome xvi. Page 619.

[‡] Thudichum: Pathology of the Urine. Second edition. London, 1877. Chapter 34, Cruenturesis. Page 362.

[§] Gull: Guy's Hospital Reports for 1866.

In a case under the care of Dr. Grainger Stewart, one crystal of hæmatine is reported to have been seen in the sediment. British Medical Journal, 20th July, 1878. Page 103.

two bands of reduced hæmatine represented in No. 5 of our

diagram.

Our two cases here dealt with, and Thudichum's case of the same disease, all agree in indicating the presence of two separate ingredients as determined by spectrum analysis, and it is desirable that, as opportunity offers, further observations should be made to ascertain how far this peculiarity is constant in paroxysmal hæmatinuria. *

CASE OF PAROXYSMAL HÆMATINURIA.

By ROBERT W. FORREST, M.D.

(Communicated to the Glasgow Medico-Chirurgical Society, 21st February, 1879).

H. D., æt. 30, unmarried, consulted me for the first time in the beginning of the present winter. He complained that, after washing himself in cold water, he immediately experienced a feeling of heat in the part; the skin at the same time became red, and small, white, itchy lumps developed in great numbers on the reddened surface, the whole series of phenomena lasting about half an hour. He told me also that the same appearances followed exposure of the skin to a shower of rain, and that dry cold, a cold wind for example, sometimes caused them to a slight extent.

He likewise mentioned that he passed blood in his water, whenever he became cold, and that this happened invariably and immediately, even although the feeling of chilliness had been confined to the feet or hands, and that, no matter how clear the urine had been immediately before, at the micturition following exposure to cold it was always bloody. It did not become dark coloured, however, after washing in cold water,

the cold evidently not being intense enough.

Up till the summer of 1877 he enjoyed ordinary health. He then was attacked with a severe pain in his left hip, which was called sciatica; for it, iodide of potassium and

^{*} Since this was written a case of paroxysmal hæmatinuria has been admitted to the Glasgow Royal Infirmary under the care of Dr. Wood Smith. In this case the bloody urine passed during a paroxysm was found to present the three bands as described in this paper, and the behaviour with the reagents applied was similar. On microscopic examination no distinct blood corpuscles could be seen after repeated examinations, although one or two doubtful structures were met with.

perchloride of mercury seem to have been prescribed. This pain still troubles him, especially after unusual exertion, and the leg is then very apt to cramp. He also complains of pain in both knees and ankles, the knee joints crackle audibly during flexion and extension, the joints of the toes are very easily hurt, and the soreness remains a long time. During the very cold weather in January, he had a slight attack of acute rheumatism, which, with exhaustion from his other ailment, kept him in the house for three weeks.

His colour is pallid and sallow, he is somewhat emaciated; his appetite and digestion are poor; there is no sign of disease discoverable in any of his organs other than his kidneys; now, at all events, and for a considerable time, his habits have been temperate and regular. About ten years ago he contracted a sore behind the glans penis, the site of which, he says, remained hard for a long time. His father has been unable for work, from rheumatism, for the past fourteen years.

The first attack occurred in the beginning of the winter of 1877; he had taken a walk down the river side while a cold wind was blowing; he does not recollect shivering, he only felt a little out of sorts before passing the dark coloured urine. This seems to be the invariable history of the onset of the disease; it is always sudden, and can usually be traced to exposure to cold or wet. The subsequent paroxysms are sometimes unconnected with any fresh exposure to cold, though the contrary generally obtains, as it does in a very marked way in this case, every attack this patient has being traceable to, and preceded by, a feeling of cold.

The attacks ceased altogether during the warm weather of summer; with the onset of cold weather they returned, and the patient thinks they are now induced by a less degree of cold than formerly. For a considerable part of this severe winter the attacks have been almost daily; he, however, has continued at his work, that of a porter at a goods station, with the exception of the three weeks already mentioned, when he had the rheumatic attack, and was confined to the house. During that time he had no well-marked attack; once or twice after being out of doors for a few minutes he thought the urine was slightly coloured, but that was all.

The cold stage in this patient lasts just as long as he is exposed to cold; by working hard or getting near a fire he is sometimes able to ward off a threatened attack; he feels the good effect of warmth so much that, during very cold weather, when at home for meals, he takes his food in bed.

Shivering only accompanies the attack if he is very cold;

when the cold is extreme, he is apt to feel sick; he, however, never has had retching or vomiting, or well marked retraction of the testicles; he experiences merely a feeling of heaviness and discomfort, which passes away when he gets warm; after a smart attack he feels unusually hot for some time. I have never seen him during the cold or hot stage, and have not

been able to get any thermometric observations.

The intensity of the colouration of the urine varies according to the severity of the cold to which he has been exposed. When passed, it is turbid, throws down an abundant sediment, and is highly albuminous, and, as in all the other recorded cases, it rapidly regains its healthy state; for instance, I have taken note of its being very dark coloured at 8 a.m. (he went to work at 7 a.m.), it had begun to improve at 11 a.m.; at 8 p.m., it was almost normal to the eye, with only a trace of albumen, and twenty-four hours later, not a trace of albumen could be discovered.

I examined a sample passed in my presence last December. It was very dark coloured, and had an acid reaction; when examined with the microscope three hours later, blood corpuscles could not be found, there were no oxalates, and only a doubtful fragment of a tube cast. In specimens examined more recently, however, tube casts exist pretty abundantly, but no blood corpuscles or oxalates. Albumen, on the other hand, seems more persistent now than formerly.*

For spectroscopic examination, see page 418.

In the treatment of this patient a fair trial was made of salicine; of opium combined with gallic acid; of strychnine combined with tincture of perchloride of iron; of iodide of potassium with Fowler's solution; and a lengthened trial has been given to pills composed of 3 grains of sulphate of quinine, with one of sulphate of iron, three taken in the day—but no good resulted so far as the attacks are concerned.

A peculiarity of this case, not noted in any other I have seen recorded, was the existence in a very marked degree of the form of urticaria previously described, + developed by the application of cold water, but not produced by tracing lines on the skin, or by any other form of mechanical irritation. While

+ Since then I see it noted by Lichtheim, see Medical Times and Gazette

of 15th February, 1879, page 178.

^{*} May 5th, patient has had only one slight attack during the past six or seven weeks; he has not been taking any medicine lately; he has gained over half a stone in weight, and looks much less anomic since the very cold weather passed away. Albumen is still found in the urine after meals or exposure to a slight degree of cold, but is usually absent from that passed on getting up in the morning.

the one arm, after washing, was all over with redness and wheals, the other was not at all affected in like manner, after scratching. Of late, this has become much less marked.

This occurrence of urticaria induced by the action of cold in a patient suffering at the same time from hæmatinuria, the attacks of which are likewise brought on by cold, seems to me to favour the view of the pathology of the disease, which attributes to it a nervous origin, rather than that which regards the symptoms as signs of disease of the kidneys, while the rheumatic family history and personal liability to rheumatism, point suggestively to there being a connection with the rheumatic diathesis in this case at all events.

(For discussion in the Medico-Chirurgical Society, on this

and other cases, see page 474.)

A CASE OF PAROXYSMAL HÆMATINURIA.

By W. J. ADAM, M.B.

(Communicated to Glasgow Medico-Chirurgical Society, Feb. 21, 1879.)

The subject of this communication is a young girl who was brought to the Western Infirmary on the 3rd of February, 1879, on account of passing bloody urine. In the evening of that same day she passed some bloody urine, and she came back the following day to show it. This day also (the 4th), she passed some in the afternoon, and was then sent up for examination to one of Dr. Finlayson's Wards, and she has been

attending there as an out-patient for some time.

Isabella M'N., act. 11\frac{1}{4} years, is the only surviving member of the family; two died before this child was born, and one born since this one has also died; but on inquiry, no points of importance were elicited as to the cause of death. This child was quite strong and healthy till she was about a year old, when she took hooping-cough, and immediately after was attacked by measles, since then she has been rather subject to cough and bronchitis. When about six years old she had an attack of scarlet fever; this seems to have been very slight, but quite distinct, as it was followed by desquamation, but there was no dropsy or bloody urine so far as known.

About a year after the attack of scarlet fever, when the patient was about seven years old, the mother noticed, for the first time, that the urine was discoloured, and on applying to a

doctor some statement was made about jaundice, but there seems to have been no yellowness of the eyes. At this time the child seemed a little sickly and to have lost her appetite, but was not seriously ill. There was no return of the coloured urine for two or three months, but ever since then it has occurred occasionally, lasting usually during one or two acts of micturition only, the water passed subsequently being quite clear. The mother states that it has usually been in the afternoon that the discoloured urine has been noticed; and about two years ago she observed an apparent connection between the paroxysms of hæmatinuria and exposure to cold. At these times slight shivering was observed, but never any violent rigor, and so far as noticed, there was no great feverishness or sweating after the attacks. The mother is quite clear that the attacks tend to occur much more frequently in winter than summer; and, as far as she can judge, they seem due to exposure to cold air and not specially to wet feet or hands; but it has to be noted that special care was taken to prevent exposure. During the attack she is occasionally sick, vomiting perhaps

Since this affection of the urine was noticed, she had an attack of inflammation of the left lung, being confined to bed for five days, and during this time no bloody urine was passed. Since then also she has had some affection of the left eye, apparently ulceration or opacity of the cornea, for which she was treated at the Eye Infirmary by atropine instillations, and this has now passed away.* She has an internal squint, which

has existed from infancy.

The appearance of the child is very anemic, and there is a slight depression of the bridge of the nose; there is no notching of her teeth. Her hearing is quite good in the right ear, but a little impaired in the left. On examining the chest it is found to present the pigeon-breast deformity. Breath sounds seem natural, and there is no evidence of hypertrophy or other disease of the heart. There is no tenderness in the renal regions, and the mother says there seems to be no pain when passing the bloody urine. No swelling has been observed at any time in the face, feet, or any part of the body.

The two samples of urine passed on the 3rd and the 4th of February, brought with her on the first day of her appearance in the wards, were carefully examined. They had a muddy, port wine colour, and were found to contain a great quantity of hemoglobin as tested by guaiac, and an enormous quantity

^{*} She is now (May 19), again under treatment for keratitis at the Eye Infirmary.

of albumen; under the microscope a considerable number of granular casts were seen, but no blood corpuscles. The reaction of the urine was slightly alkaline (probably from decomposition), and numerous crystals of triple phosphates and urate of soda, and a few oxalate of lime octohedral crystals were found in one of the samples.

The mother said that the urine passed later at night on the 4th was perfectly clear, and on the morning of the 5th the sample passed in the wards was free from blood, gave no reaction with guaiac, and contained no trace of albumen. Three days later (8th Feb.) the urine was again examined and found quite

natural.

On the 15th February the mother reported that there had been no blood passed since the last examination. The child had only been out of doors on one day, however. Two samples passed in the ward on the 15th, were quite natural to all the tests, and only a few oxalate of lime crystals were found

under the microscope.

On Monday, the 17th February, the mother brought up a sample of bloody urine, passed on Saturday evening, the very day she had been at the hospital. The urine had remained clear till Saturday afternoon, when, after returning home from being out with her mother, her urine was observed to be bloody about seven o'clock at night, although the child did not seem to be otherwise ill; the urine passed before she went to bed was quite clear. The bloody sample brought for examination had a high colour as before, decomposition had again unfortunately begun. It was loaded with triple phosphates, the specific gravity was 1020, there were two or three tube casts

seen, but no blood corpuscles were yet detected.

On 20th February the mother reported that there had been no attack since the last note, which was three days ago. A drop of blood from the finger was examined, but presented nothing unusual in the shape or size of the corpuscles, although in all the specimens there was an absence of the usual running together of them into rouleaux. A sample of urine passed in the ward at 10 A.M. that morning seemed clear, and presented to the naked eye no marked blood colour, but on testing it with guaiac a marked reaction was obtained, it likewise contained a small but quite distinct quantity of albumen on testing with nitric acid. A large number of tube casts were found, hyaline or with pale granules, and perhaps one or two minute oxalate crystals; but although a careful search was made, no blood corpuscles were detected. From the reaction of blood and albumen, it was thought the child might be just

beginning with an attack, particularly as the morning was cold and with snow on the ground. She was, therefore, by Dr. Finlayson's orders, detained in the ward an hour or two to allow of another sample of her urine being obtained. This was got at 12·30, it had no blood colour to the naked eye, gave no reaction with guaiac, and showed no trace of albumen. On standing for a time the samples precipitated a sediment of amorphous urates; under the microscope, in addition to urates, some oxalates were seen in the second sample, but no tube casts or blood corpuscles; as the urates, however, were very abundant, the examination was not perhaps very satisfactory.

Tuesday, 18th March—The mother brought up this morning four samples of urine. Three of these were passed on the 17th, and one on the morning of the 18th. The first sample has a deep port wine colour, spec. grav. 1020, is slightly acid, contains albumen, and, under the microscope, urates and a few finely granular casts are seen, but no crystals or blood corpuscles. This sample was passed about 3 p.m., immediately after the girl had returned to the house from playing on the common stair. She shivered slightly, and said she felt cold, but otherwise did not complain. The second sample was passed about 5 p.m., and was still obviously very bloody, but of a much paler red colour; it was slightly acid, gave the reaction with guaiac, and contained albumen; microscopic examination discovered a few tube casts, but no crystals or blood corpuscles, amorphous urates were also present. The third sample, passed before going to bed, and the fourth sample on the following morning, had no blood colour, no trace of albumen, and gave no reaction with guaiac, only a few minute oxalate crystals were seen under the microscope, in short, they seemed normal.

March 19th, other three samples were brought to-day; two passed in the evening with a markedly blood colour, and one in the morning apparently normal. The examination of these specimens, however, did not bring out any new features.

March 22nd, three more samples were sent up and carefully examined, with much the same result as before. The first two samples, the one passed at 3 p.m. and the other at 4·30 p.m., were of a deep red colour, and had sp. gr. of 1,009 and 1,015 respectively. The third, passed at 5·30 p.m., was of a much paler red colour.

For the spectroscopic examination of these specimens, see

page 418.

Remarks.—As the patient in this case is a child, the subjective symptoms may not be so minutely detailed as is desirable, but those given above were obtained from the child's mother,

who, it may be stated, seemed an intelligent woman. In this case, as the child was an out-patient, there was no opportunity of taking the temperature during an ordinary attack; but after what may be called the abortive attack, which took place in the ward on the 20th February, the temperature was taken and found to be 99°4 in the axilla. From that fact, we may suppose that it would be much higher after an attack of ordinary severity.

It will be observed that in none of the samples of urine was a single blood corpuscle detected under the microscrope. In every sample, numerous and careful searches were made for corpuscles, and with regard to one of the bloody samples, the search was made by three observers, with separate microscopes, with the result stated. In some of the cases, the percentage of urea is stated to have been greatly in excess. In this case, no attempt was made to estimate the amount of urea, as the observations could not be controlled, and with so much blood present, it is a matter of extreme difficulty to ascertain the amount of urea with any degree of accuracy.

In conclusion, attention may be called to the early age at which this child has become affected, and also to her sex; both

of these are unusual in this peculiar disease.

AN ADDRESS ON TEMPERANCE IN THE TREATMENT OF THE SICK.*

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(Delivered at the request of The Glasgow University Total Abstinence Society.)

Gentlemen, I gladly avail myself of your invitation to speak on the use of stimulants in the treatment of the sick, as it will enable me to state what have appeared to me the limits within which these agents are profitably employed, and to caution those of you who propose to become medical practitioners against their too prevalent abuse in the sick room. I do not

^{*} This Address was prepared without the most remote intention of publication, but as it appears, from various notices of it in the newspapers, as well as from letters addressed to the author, that its nature and teaching have been much misrepresented, Dr. Macleod thought it best to insert it in the Glasgow Medical Journal.

pretend to do this in any complete or exhaustive manner, as I have at the moment very little time at my disposal for discussing so wide a subject, and especially one which admits of much controversy. When I accepted your invitation to address your Association, I distinctly stated that I was not a total abstainer, and that as a surgeon I could not advocate entire avoidance of stimulants in the management of disease, but that I was a strong advocate for temperance, both for the healthy and sick, and that I could in this way sympathise with the aims of your Association, and perhaps advance their objects by explaining within what narrow limits I thought it desirable to use alcohol in the treatment of disease. As my experience has been almost exclusively surgical, my remarks must be held as chiefly applicable to that branch of practice.

I desire further to premise that I expressed my intention to enter into no elaborate discussion regarding the physiological or pathological action of alcohol, chiefly because many of the observations and conclusions regarding it are, as yet, very undetermined and lack authority, also because it was mainly from a practical point of view that I wished to speak of it.

Although I am fully aware that my personal views are not altogether in accord, as I have already hinted, with those of this Association, yet I heartily rejoice that there exists within our University a society of young men who have erred (if they be wrong at all) on the safe side as regards the use of stimulants, and who are prepared to practise in their future careers the principles they have here seen right to adopt. If all men could be perfectly temperate in their habits, there would be no need of total abstinence societies. The grievous evils which flow from intemperance, and which no one deplores more than I do, have had the effect of driving you, and many others, to the extreme of total avoidance, but it has not convinced me, and many more, that such is the best way of combating the enemy, so you and I must be content to differ, though I believe that the difference between my own personal practice and yours is after all very slight indeed. I think I may congratulate you that an evident improvement in the tone and spirit in which discussions regarding temperance are carried on has marked the last few years. There has been in the past much bitterness and unfair dealing on both sides, and not unfrequently an evil spirit of misrepresentation as to sentiments and motives, and even direct and conscious lying. which is most deplorable, and can only eventuate in retarding the good which might otherwise result. Truth has been too often disregarded for some temporary advantage, and a narrow

and bigoted spirit engendered. Whatever we do with regard to this question, let us flee such ignoble and mean devices, and if we differ from others in our opinions, let us do so openly and frankly, giving our adversaries credit for as conscientious convictions, and as high aims, as we believe actuate ourselves.

Many of you are students of medicine, and of course it is to you that I chiefly address my remarks. You will some day become members of a profession which, perhaps more than any other, can influence public opinion regarding temperance, and no class of men should, from their special calling and duties, be themselves more strict in the practice of self-control. I regret very much to think that there is much intemperance still in the ranks of my profession, and that many of its members have sadly betrayed the trust which they should ever consider is imposed on them of being guides and examples in all such points. I know that there are many excuses, especially in country practice, which may be very plausibly advanced for a doctor's indulgence in intoxicants, but none of these reasons have any good foundation or are in any way valid when honestly considered. When we take into account the important interests which are entrusted to medical men, and how essential it must be for the due performance of their duties that the mind be kept clear and the hand steady, it is not too much to assert that, of all members of the community, doctors should be most temperate.

With all this, however, I may make bold to assert, that no body of men have done more for temperance than the doctors. The evils which flow from undue indulgence have been described and accurately traced; the effects, be they good or bad, which alcohol produces, have been investigated and formulated; and the apparent limits within which it can be used, let us say without harm, have been carefully described by medical men. In no class are there to be found more ardent advocates for temperance and even for total abstinence, and we all know how large a number of medical men there are who have done good service to the cause of temperance by their example. It is certain that not even clergymen see so much of the harmful influences of intemperance as doctors, and they of all others are best able to appreciate how wide-spread are the evil effects of intemperance. It is surely our part, then, to give our best attention to this subject, and to consider with intelligence and care its bearing on other social questions allied to it.

To those who practise medicine in a great city such as this, it cannot fail to be a source of wonder and regret that so large a number of people use alcohol habitually in excess. A very

large proportion of our hospital patients are addicted to such habits, and a very considerable proportion of the accidents and diseases with which we are called on to deal are more or less directly due to such tendencies. The recklessness out of which the accident arises, the complications which follow it, the difficulty of securing a complete and satisfactory, not to say a rapid recovery, are in many cases the direct results of indulgence in alcohol. Many patients are chronic inebriates, whose vital organs have been weakened by long excess, and whose recuperative powers have been sadly if not fatally weakened. In private practice also we are often opposed by the occult influence which arises from the same cause. Being carefully concealed from us, it may be long of being discovered, but we yet daily trace its pernicious effects in thwarting our remedies. We perceive the same thing in dealing with the children of intemperate persons. Their ailments, mental and corporeal, not unfrequently take a complexion of their own from the habits of the parents. The low vitality, the stunted growth, the late maturity, the epileptic seizures, the hydrocephalus, and numerous other morbid conditions met with, occasionally own the intemperance of the progenitor as their cause. It is now well known how apt intemperance is to become hereditary, and to beget various forms of insanity. On the other hand, I have been much struck with the very considerable number of persons who, applying for assurance on their lives, have told me they had become total abstainers from the warning influence produced by a parent's intemperate habits.

In administering alcohol to the sick, it is important to learn, if possible, what was their previous habit regarding its use. This information is often very difficult to obtain. A large number desire to be considered very temperate, when, in truth, if they are judged of by ordinary standards, they would be classed as very much the reverse. Men's notions of temperance in this, and many other things, differ very widely. In the hospital, we always try to form, if possible, some estimate on this point. Occasionally, in private practice, we are entirely and intentionally misled. There is no more painful feature connected with intemperance than the deceit and shameless deceptions to which it leads. Whenever a patient takes exceptional pains to define to us the exact amount of stimulant he consumes, and when he adverts to it again and again, we should be on our guard against deception. When, after having apparently exhausted all inquiries, they yet linger, having something still to ask, and come out with what was evidently the question which lay all the while uppermost in their thoughts, "Oh yes, and, by the way, what about stimulants?" you may be tolerably certain that it is a point which requires attention. I am frequently interested to observe the cautious, cunning, assumed sang-froid with which a husband or a wife, coming to consult one in company with the other, will put the question, without daring to look at their companion, in whose startled face you at once read how important is your answer.

Some of those who indulge most will prove very obtuse in understanding all such indirect questions as you may put, in order to find out whether your suspicions are well founded. They will express great astonishment and horror if the inquiry be so pointed as to leave no door of escape, and their loud denunciation of such vile habits may even allay your suspicions

and deceive you entirely for a time.

Further, there is a certain number of persons who consult with the very thinly veiled design of getting you to connive at their habits. Very likely they have been blamed at home for overindulgence, or possibly their own consciences demand to be quieted. They give you a pitiable account of their weakness of body,—their feeble digestion and their mental depres-They have such feelings of "sinking,"—such flatulence and misery. They cannot eat till they taste "a mere drop," and they commonly quote some distant or deceased practitioner for the authority to take the "thimbleful" in which they so often indulge. If you oppose such practices, as you are bound to do, knowing how certain they are to increase the evil, and lead to eventual destruction, the chances are you will never see the patient again, as he will at once discover that you "do not understand his complaint," and will seek the aid of a less scrupulous practitioner. This leads me to say that an unconscientious and unprincipled medical man may very readily increase his clientèle by pandering to these tastes, as many who desire the authority and countenance of a medical attendant to pursue their destructive habits will gladly seek his aid. success is, however, usually but short lived, and cannot fail to leave a sting of self-reproach in the breast of the practitioner.

Alcohol is said to increase the flow of the gastric secretions when used in moderate quantities, and so to promote the digestion of food. The limit, however, to its acting thus is a very restricted one. If used in any quantity it never fails to irritate the lining membrane of the stomach, and so produce the very opposite effect to that stated. A small quantity, however, soon loses the effect sought; as the amount is increased the deterioration which over stimulation is certain to induce is

brought on, and the terrible indigestion of the tippler is established.

In the treatment of shock—of violent and overwhelming depression of the vital powers—I hold that alcohol is our most rapid, sure, and convenient remedy. It is true it must be employed with great care, like any other powerful agent, and its effects watched and controlled; but there is no other agent which in extreme cases can take its place. In the crisis of several ailments in which the tendency is to death by astheniain the struggle for life which marks a certain period in the progress of septicæmia—in the depth of feebleness which follows the "turn" in not a few complaints, and in which food of all kinds is loathed, and cannot be assimilated—in the weakness of old age, when the fire burns low and the heart threatens to cease its function—in failure of the circulation through the extremities from heart weakness—in those states of the system in which waste overtops repair, notwithstanding all the aid received from food—in spreading gangrene, when a line of demarcation or one of separation is anxiously sought for—in extensive burns and frost bites—in hæmorrhages and some internal congestions—in combating wasting discharges and in the depression and exhaustion which attend some forms of cancer, there is good of the most manifest kind to be got from the judicious and properly timed use of alcohol, which no unprejudiced man can deny. In many ailments which tend to exhaust themselves if life can only be upheld long enoughwhere the ship has to be worked round a point into smooth water, and the powers of life, already sorely taxed, will surely fail unless urged by an agent which can act quickly and effectively, an agent whose power we can estimate with tolerable accuracy, and regulate with fair success—then, I think, alcohol has the advantage of all agents known to me.

Put against this, however, what I know from experience to be the fact, that in the great run of surgical ailments—in the great majority of those I have to deal with either within or without the walls of the hospital—no aid is required from stimulants; but, on the contrary, these complaints are much better managed without alcohol. At the mement I address you I have under my care more than fifty surgical cases, and only one, and she a very weakly woman, with blood poisoning, is taking alcohol. Among the cases I allude to are many who have undergone serious operations, and many old and feeble people. I mention this to show that, while I resolutely defend the use of alcohol in certain cases, I am but little given to its administration in the usual practice of my profession. It is

food and not stimulants the mass of patients require to restore them. If food of a nourishing and concentrated kind can be taken and assimilated, that is what will recuperate our patients and prolong their lives. Alas, it is the want of this power of assimilation which baffles us so frequently in dealing with disease, and that is not unfrequently the offspring of previous intemperance.

Again, it is a familiar observation that alcohol is a powerful and useful sedative to most people—not to all, however, and I profess to be among that exceptional number. I certainly subscribe to the statement that alcohol, if rightly used, does recruit the power, and restore the function of the nervous system when exhausted by overwork. It steadies and quiets the overaction which succeeds over-use, and promotes calmness and rest. To do this, however, and no harm, it must be employed within strict limits, and these vary in almost each individual, and can only be judged of by the effects. To some it is a gentle and happy sedative, followed by no evil, given after the ordinary employment of the day, when otherwise restlessness and functional difficulties would worry and harass. It is much to be regretted that the worry and hard work of the day necessitate so much strain and nervous exhaustion, and it is, I imagine, because men have come to know the good to be got from alcohol in relieving their burden, and have in time been led on to excesses in its use that, some at least, of the intemperance of our time has originated. So much the worse. It is one of the inevitable results of human affairs that good thus gets perverted.

That alcohol impedes oxydation and so retards disintegration of tissue is, I believe, admitted. That it diminishes wear and tear, both in health and disease, must also, I suppose, be allowed. In fever it brings down the pulse, and steadies it —it decreases the burning heat, which so exhausts, and it promotes the equalisation of the circulation. It is thus capable of at least assisting to arrest the leak, and gives time for other remedies to act. In some who are not actually ill it so conserves their power as to avert ailments which would otherwise assail

them.

Finally, that alcohol makes many men feel more comfortable: helps them to digest their food more easily; lets them sleep better; makes them more sprightly and brilliant in society; more mentally active; in short, makes them happier in relation to themselves and others, I am quite ready to admit; and whatever view we may take of the abstract question involved, these circumstances are of some value, and deserve considera-

tion in this humid and cheerless climate. I would, however, qualify all this with the important proviso that, to do this, alcohol must suit constitutionally those using it, and that it be employed with moderation. With some (and I am one of the number) it does not agree at all, and for all such it will produce diametrically opposite results if taken in excess.

Well, let us now for a moment consider in what form alcohol

is best administered to the sick, and in what quantities.

When a pure stimulant is required for a temporary object, to act quickly and decidedly, as in shock, or the crisis of an ailment, brandy or whisky serve the end best. On the whole, in Scotland, these spirits are less objected to than either rum or gin. For more continuous use, as during convalescence, a "bloodmaking" wine fulfils the object more satisfactorily. In my experience, Burgundy is the best of these wines, but claret or hock suit some better. Gouty people do well with hock. Occasionally, but rarely, the Spanish and Portuguese wines agree best with the invalid. I do not think, however, that, as a rule, either port or sherry, of whatever vintage or complexion, suit sick people. They contain too much sugar, and so occasion acidity. The dryer sherries are occasionally grateful, but in sound claret and Burgundy-not in the cheap and acrid fluids which so often go by these names—our best and safest reliance must be put when we desire to add to the food an agent which will help to re-establish the nutrition and vigour.

It is, beyond doubt, with food, or very shortly after it, that stimulants should be taken by the sick. If partaken of on an empty stomach, they act violently and quickly on the heart and nervous system, and that effect we, of course, occasionally desire; but then there is more irritation and more risk of injury to structure, and the agent is quickly thrown off by kidneys, lungs, and skin. If, again, our object be (as is more common) to stimulate without over-exciting the gastric secretions, and so to promote the assimilation of the food, and also to augment the heart's action, and strengthen the nerve centres, then we should

scrupulously confine its use to the meal hours.

It is, in my opinion, impossible to lay down any general rules as to the quantity of alcohol which should be administered to the sick. Each individual case must be judged of on its own merits. No two cases are exactly alike in this, or in any, of their clinical features. The nature and stage of the ailment—its violence and its tendency, the individuality or idiosyncrasies of the patient, together with his past history, his temperament, habits, proclivities, and constitution—the climate and season, as well as the amount of food he can

partake of, must all be considered. The circumstances as regards protection against atmospheric changes in which our patient is treated are also not without value in deciding as to

the form and amount of stimulant employed.

Whatever conclusion we come to as to administering or withholding alcohol, we must be on our guard against the aphorism of Liebig that alcohol is food. It is so practically only to a very limited extent, and in exceptional circumstances. doubt, when partaken of in moderation by those who possess a fair power of assimilation, it is burned up and converted within the body into new combinations, which are capable of replacing wasted elements, and so it economises food, and in this way it is an adjunct to the ordinary nutrient elements of food. Thus, we secure all its good effects, and diminish or neutralize what possible evil influence it may engender. If the amount of alcohol used be in excess of what the economy of the recipient can work up profitably, and without strain to those organs which concern themselves with it, then alcohol may, I doubt not, be taken at least without harm, and in some cases with positive good, by the invalid; but, the moment that the brain and heart are overstimulated, or the liver and kidneys are overtaxed, then harm comes, slowly it may be, but yet surely

in the long run.

Drs. Parkes and Garrod have tried to define accurately how much alcohol at a time a healthy man can use without any harm, and from their observations we may, to some extent, appreciate what the sick require. Of brandy, whisky, and gin, six tablespoonfuls is the limit. Of port, sherry, Madeira, four wine glassfuls. Of champagne and Burgundy, six glassfuls; and of hock, and claret, something more. These are the maximum quantities which a healthy man can partake of without harm. An invalid would not probably, as a rule, require above the half of these quantities, and the stimulant should be fully diluted and used, as was before said, with food. Sound malt liquor is another form in which alcohol, combined with various nutrient matters, is occasionally used profitably by the convalescent. It is requisite to know, if possible, something of the patient's former experience regarding the use of such beverages before we prescribe them, as there is much idiosyncrasy among people with reference to malt liquors. In the sick room, it is generally desirable to administer alcohol in such forms as suit the patient's former habits and tastes. If this is not attended to, almost all the good it might do is lost from the repugnance which may be created. It is but rarely that children require alcohol at all. At the crisis of violent ailments, however, brandy may be needed to preserve life, but we must be even more than usually scrupulous in employing it with them.

I would strongly warn you against the careless way in which the amount of stimulant to be used is too frequently prescribed in the sick room. Occasionally one hears friends told to "be good to the patient," or to take care and "keep up his system," or to "stimulate him freely." No such lax and injudicious instructions should ever be given, but the exact quantity scrupulously laid down, and care taken that it is adhered to. Weak, nervous, worn out persons will put a very liberal interpretation on any mere general instruction, and thus you come to discover that food is neglected for alcohol—truly, "One halfpenny worth of bread to this intolerable deal of sack." Never allow the bottle containing the stimulant to be kept in the sick room, but let the precise amount to be consumed in the twenty-four hours be put into a separate phial, so that its progressive use may be judged of accurately. It is in the management of such details that a trained nurse proves so invaluable. You will soon find how little authority relatives often have with an invalid, and how little reliance can be put in unskilled attendance. Not very uncommonly, you will be intentionally deceived by anxious friends, who fall into the common error of supposing that the strength is to be regained by the use of alcohol rather than by food. We must explain the true use of stimulants to those about the patient, and get them to see that such agents are to be given with as much precision and care as opium or any other drug. Let them understand that if used as ordered good will be got, but that an overdose may prove most injurious and harmful.

Now, the practical teaching of all this may be summed up by saving, that the vast majority of surgical ailments do not require an alcoholic stimulant at all for their successful treatment, but that for some it is useful, and for a few most important. That in every case in which the question arises whether we are to employ alcohol, we should very carefully and attentively consider whether the good to be gained by its use is greater than any harm which can result. We must be clear that the indication for its employment admits of no question to our experience, and knowing and having come to a conclusion on that point, we try to define the best form in which to administer it in the special case before us. In any case, if the need is not pressing, begin with a small dose, and slowly augment it to that quantity from which increasing good is got, being ready to diminish or stop if need arise. Daily, or even in bad cases, hourly observation will be required to clear up the

problem, and our chief guides are to be got from the tongue, pulse, skin, secretions, and sensations. If the tongue gets cleaner and more moist—the pulse firmer, slower, and more regular—the skin less pungent, and more soft and natural—the secretions more healthy—the sensations more comfortable, and the mind clearer and calmer, then we may dismiss all fear that harm is caused by the remedy; but, if the contrary effects follow, then the quantity must be diminished, or the alcohol altogether discontinued. In short, alcohol is a powerful agent for good or bad; and if we use it at all in the treatment of the sick, we must, as it were, constantly interrogate those organs

which tell us how it is acting on the economy.

Once for all, I would add that it is wrong—it is criminal, in my opinion—to employ such an agent carelessly, and without the most scrupulous and conscientious safeguards against its abuse, and without stopping it so soon as it can be done without. The practitioner assumes a great responsibility when he administers alcohol, especially to one who has not before used it, and he must see that by no carelessness of his shall injurious habits be inaugurated. There cannot be a doubt but that intemperance can frequently be traced to the license of a sick room, and such a result must be a terrible reflection to those responsible for it. We must ever bear this in view, and make it clear when the use of the stimulant is to be given up.

Finally, I most heartily subscribe to the opinion which, I am glad to think, begins to prevail, that there is no risk whatever in withdrawing alcohol suddenly and absolutely from inebriates. I have long known and practised this. It is, in my experience, the only hope for their recovery. Half measures always fail. Let it be absolutely forbidden in any form and quantity, and though I am not very sanguine as to success in the case of confirmed drunkards, yet, for those less hopelessly abandoned there is, by following rigid abstinence, a chance of reform. Nourishing fatty food, sugar, plenty of fresh air, and mental employment will help to wean the victim from his poison.

Such, gentlemen, are a few suggestions, hurriedly put together and imperfectly expressed, upon this very wide and important question. I have honestly stated my opinion, so far as I could, in the time at my command, and cannot suppose there can be any great divergence of view between my "temperance" ideas and your "total abstinence" ones. I assert that "temperance," in the sense in which I use it, is a middle term between excess and total abnegation, and as such, is true moderation. For one to abstain entirely from alcoholic bever-

ages who has no special call to do so from any peculiar temptation to which they expose him, or from some special circumstance connected with his profession or social surroundings, which render it "expedient" that he should make this sacrifice, is, to the mind of many, less moderation, than to use these mercies in a legitimate way, and in due subservience to judgment and reason. Personally, I look on them solely as luxuries, when a man is in health, and not over burdened with work; but, even as luxuries, legitimate and fairly to be used by those who can employ them without abuse. Alcohol has been employed by all peoples and in all countries throughout all time, and if from religious scruples some nations have abandoned it, they have not failed to substitute other agents as powerful and as capable of misuse. It is, as I have already said, a most powerful agent for good or evil, and while I very heartily sympathise with those who, driven to despair by the pernicious effects, moral and physical, which have arisen from its misapplication in this country, and who, overwhelmed by the waste it occasions and the cruelties it gives rise to, see no door of escape but entirely to expel it from their midst as an unclean thing, still, those whose judgment leads them to a less uncompromising conclusion, are entitled to a calm and dispassionate consideration. There are many thoughtful men who deprecate such extreme views, but who desire most earnestly that our people should learn to use their mercies with due moderation, and, in accordance with enlightened reason and knowledge; and that this grand imperial race, which God has endowed with mental and physical gifts which were never before combined in any nation under the sun, should exercise its privileges, so as to gain from them that measure of good which they are capable of yielding, and shun those debasing evils which have, to some extent, obscured its power, though they have failed to limit its dominion over the ends of the earth. It has been well said that there can be no sin in using an agent which our divine Saviour himself consecrated in his earliest miracle on earth, and which, though denounced in numberless ways throughout the Scriptures when employed in excess, is yet spoken of as the oblation poured out unto the Lord. Wine has been given us for our good, as truly as endless other agents, and, if we have wrested it to our harm in many cases, that is no valid reason for its entire rejection.

However this may be, gentlemen, I have no desire for controversy here, and have said more having the complexion of contention than I wished or intended. Let me only add, that no question is more worthy of your attentive thought than

this we have been considering, and that whatever conclusion you may come to, I trust you will each, individually, be living examples of temperance in this and all things. Our profession may do much to promote temperance, and it is its bounden duty to exercise its wide-spread influence to such a good end. One of the most painful sights I ever saw was the graves of three young medical practitioners, all victims to intemperance, which lay, side by side, on the sunny slope of a Highland hill, beneath the shadow of an ancient cross, which had been erected by the self-denying Anchorites of the early faith. One after another, they had gone to practise their divine art, and in succession, fell victims to their self-indulgence, a melancholy picture of neglected talents and wasted lives.

Gentlemen, let us all determine that we will avoid all such vices, and fulfil the old promise, which Hippocrates, the father of our science, imposed on his disciples (and which is almost exactly reproduced in the declaration you will all sign on graduation here), "I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious or mischievous. I will give no deadly medicine to any one, if asked, or suggest any such counsel, and with purity and holiness, I will pass my life and practise my art." These are noble words,—they were the sentiments of a Pagan, but they would do honour to the most exalted Christian.

SOME REMARKS ON THE EXCITING CAUSES OF EXPENSE IN THE ANTISEPTIC TREATMENT OF SURGICAL CASES.

By GEORGE T. BEATSON, B.A. (Cantab), M.D., Edinburgh.

THE antiseptic system of surgery, as devised by Mr. Lister, and taught by him for several years, is now more generally adopted and carried out in the private practice of surgeons, and in the wards of our large hospitals, than was the case when he himself was present amongst us on this side of the Tweed. Its merits and advantages are now more willingly acknowledged, and time has shown that not only in the hands of Mr. Lister himself have good results been attained, but the truth of his teaching has been demon-

strated by the successes of many other independent workers. Bound up, of course, with this matter of antiseptic surgery is the questio vexata of the germ theory, and while I really think that the upholders of that theory have at present the best of the argument, yet, in some ways, I believe it is a point of secondary importance to practical surgeons. To them a grain of fact should be worth a pound of reasoning, and it should suffice for them to know that if they will but follow, in their treatment of wounds, all the details of application which have been deduced by Mr. Lister from this germ theory, they will obtain the same satisfactory results that he and others have been able to achieve. They have only constantly to bear in mind that, if they wish success from the antiseptic system of surgery, they must execute it exactly as recommended, because the different parts of it are so intimately connected one with the other that, if any of them are omitted or altered, attempts to carry out the system will only end in

failure and disappointment.

While admitting the greater spread of the antiseptic system of surgery, as well as of the more extended employment by surgeons of the antiseptic materials introduced by Mr. Lister, I very often hear advanced against the system the charge that it is too expensive for general use, especially in large establishments. Believing firmly that this is an unjust charge, and that it is not an element inherent in the system itself, but arises frequently, if not always, from want of care and thoughtfulness on the part of those concerned in carrying it out, I have thought that it would not be out of place to offer a few remarks on this question, and to draw special attention to certain matters of detail in the management of antiseptic cases which, if passed over or neglected, are apt to lead to unnecessary expense. Having had the privilege of learning the antiseptic system under Mr. Lister himself, and having had some experience in carrying it out, both in hospital and private work, I have formed the firm conviction that it requires only careful management to make it as cheap a method of treating wounds as any of the more ordinary ones in vogue, while it is the most reliable. My remarks will bear equally upon the management of cases either in private or in hospital work, but they will be specially applicable to the latter, where antiseptic dressings are carried out on such a scale as to make it worth while to attend to minutiae, which, if carried out in a large number of cases, are calculated to effect eventually a considerable saving.

1. The first point I would especially insist upon is that the

size of each dressing should be suited to the requirements of Often it has fallen to my lot to see, applied to small wounds, dressings so large and ample that, in the case of the limbs, they folded round and round the part, and, when they were removed and thrown aside as soiled and useless, they were still, in a great measure, unstained and surgically useful. This lavish expenditure of material, brought about by making dressings larger than is necessary, is one of the most fertile sources of expense. And it can be very easily avoided, for in every case we have a guide to the size of the dressing required. While it is absolutely essential that the dressing in each case should extend in every direction freely beyond the incision or the wound, the limitation to be put on this free extension depends entirely on another point which must always be taken into account, and that is the amount of discharge to be expected. This varies with each individual case, but it is not impossible to form beforehand an idea upon this point. Thus, it would not be necessary to apply such a large first dressing over the incision left after the removal of a fatty tumour, the size of an orange, as would be required in the case of a psoas abscess, although the size of wound in the latter case might be even less than in the former instance. But we know from experience that even though we empty such an abscess as thoroughly as we can at the time of opening it, there is always, in these cases, a free copious discharge during the first twenty-four hours, which must be provided for, while in the case of the fatty tumour we have only to meet a serous discharge, not of any large amount, and due chiefly to the action of the carbolic acid on the tissues during the operation. There are some dressings which are best made by following certain measurements. I refer to such dressings as those requisite for excision of the mamma, and for amputations or compound fractures of the extremities. Thus, in the case of an amputation of the thigh, it may be taken as a rule that the size of the dressing in all its measurements should be the circumference of the limb at a point a little above where the bone is to be sawn through. Suppose, for instance, the thigh at that point measures twenty inches in circumference, then a dressing twenty inches square will be found sufficient for the requirements of the case, and will admit of being turned up over the face of the stump.

2. Next, as to the thickness of the dressing. On no consideration should it be composed of more than eight layers of the gauze. There is no particular virtue in that number, but experience has shown that this thickness of dressing is amply

sufficient for any case, even during the first twenty-four hours, provided attention has been directed to the point already dwelt on of proportioning the size of the dressing to the amount of discharge likely to be present, and provided there is placed a piece of the pink jacconette or thin mackintosh cloth beneath the outer or eighth layer of the gauze, so as to distribute the discharge over the whole area of the dressing, and not allow it to soak directly through; for, if it did so, it would soon wash out the portion of acid there stored up, and thus give access to putrefactive agencies.

3. The mode of making the gauze dressings for each individual case may be either an economical one or an extravagant one, according to the procedure adopted. Some take one of the 6 yard pieces into which the gauze is usually folded, and, with scissors, cut out a dressing of the size they think needed, and then cut a piece of the jacconette to match. This method cannot be too much condemned, as it not only spoils the 6 yard piece of gauze, and interferes with its further usefulness, but it leaves a lot of cuttings behind that cannot be very well utilized, and makes a dressing the layers of which, being all in separate pieces, are liable to slip and are not available for any ultimate use, as I hope to show that the gauze dressings really are. The best plan to follow in any antiseptic case is to cut out at first two similar pieces of jacconette of the size required for the dressing. Taking, then, one of them, measure off from one of the 6 yard pieces of gauze the amount required for making a dressing of eight layers sufficient to cover the piece of jacconette, and tear it off as a whole. When this is done, fold it to the proper size, and place the piece of thin mackintosh as advised between the seventh and eighth layers. Such a dressing is all in one piece, and can be utilized afterwards, and there are no small pieces left as cuttings, which are with difficulty made available for anything. It will soon be found that, with a little care and measurement of the piece of mackintosh, it is not a difficult matter to tear off the amount of gauze requisite for the dressing.

I have said that two pieces of jacconette should be cut off when the dressings are first made. My reason for advising this is, that a second dressing can be made at the same time as the first one is, so as to be ready for the first occasion when the dressing requires to be changed, and thus obviate the necessity of any further measuring. It also ensures the dressings being of the same size. In the case of hospital patients, it is a good plan to fold up this second dressing, and

place it under the mattress at the head of the patient's bed, so that it is always known where it is, and there is no chance of the dressings of different patients being confused. The utility of this procedure is also evident in cases of operation; for, if anything occurs necessitating the changing of the dressing in a hurry, as, for instance, hemorrhage, no delay occurs in getting a fresh dressing made, for there is one available at once.

This same principle, as regards the dressing, should be carried out throughout the whole course of an antiseptic case, and it should be a fixed rule, at any rate in hospital work, that whenever a dressing is changed the piece of jacconette should be at once taken out of the old dressing, sponged clean with some carbolic lotion, wiped dry, and the new dressing made and placed as before under the patient's mattress. This saves time, prevents confusion, and ensures the pieces of mackintosh not being lost, or transferred to some other case—a not uncommon occurrence in hospital, and one which necessitates the replacement of the mackintosh. Too great care cannot be exercised in reference to the jacconette. If it has to be renewed often in the course of a case, it adds considerably to the expense, for it is one of the most costly of the antiseptic materials; whereas, with care, there are few cases so lengthy that the first pieces of mackintosh cut for them will not suffice.

In the folding of the dressing that is thus kept in readiness, I may observe that the dressing should be doubled on itself with the mackintosh on the outside, so as to prevent any dust or septic particles falling on the surface that will be next the wound, and a good plan is to place in the interior of the folded dressing a small bit of gauze for dipping in the lotion and applying next the wound together with a piece of protective, if

that material is required for the case.

4. Another point directly bearing on economy is the frequency with which the dressings are changed. In this matter of changing dressings we have a guide given us in the presence or absence of discharge, and if we follow it we shall not fall into error. Of course, as a general rule, it is customary to change the dressings in a case the day after an operation, but after that it is advisable to be guided by the presence or absence of discharge. The limit of time that a case should be left without changing the dressings is a week, and the reason for that limitation is that at the end of that period there is a risk that, from its volatility, all the carbolic acid may have left the dressings and thus rendered them insecure. If, however, at any time before the six days have elapsed, the presence of dis-

charge is visible at the edge of the dressings, it is necessary to re-apply fresh ones, as mischief may spread inwards from without. We can safely follow this rule, and indeed we ought to, for it is clear that, if dressings are changed twice a week that really only need it once, a waste of antiseptic material and a considerable additional expense is entailed, and moreover, we are thereby prevented from obtaining the full advantages of the antiseptic system, which aims at ensuring to wounds that perfect rest and freedom from all irritating influences which is so needful for healing and cicatrisation, but which is apt to be interfered with by too frequent changing of the dressings.

I need hardly say that in these remarks I am supposing that no other indications exist for inspecting the wound, such as pain in it, or constitutional disturbance on the part of the patient, or the presence of stitches that require removal. Should any of these be present, they must not be lost sight of, but must have due weight with us in deciding on the

necessity of changing the dressing.

5. I shall next allude to a point of detail in the antiseptic system of dressing wounds, which is of somewhat recent origin, but which, when carried to the extent it often is, materially affects the question of expense, and also indirectly has some bearing on the rapid progress of the case, as I shall presently show. I allude to the practice adopted by some surgeons of applying next to the wound pledgets of gauze, often of large size, and several layers in thickness, soaked in carbolic lotion, and covering them over externally with the outside dressing described above, and shown by experience to be by itself quite reliable and safe in all cases. The principle involved in the practice is a correct one, but it is carried out on too lavish a scale, and it has assumed in the hands of many such proportions that it leads to a most extravagant use of antiseptic material. It is easy to see how the custom has arisen. It is known that carbolic acid is given off very slowly by the gauze at the ordinary temperature of the air, and consequently it is not impossible that septic organisms, or at any rate septic particles, might be present on the surface of the dressing applied next to the wound, and might set up mischief there before the heat of the body had time to volatilise sufficient carbolic acid to render inert these putrefactive agencies. Of course, in cases where the spray was being used, there would always be a certain amount of it deposited, both on the surface of the gauze dressing while it was being applied, and also on the wound and its vicinity; but Mr. Lister's attention being

directed to this source of danger, he considered that it was better to provide against the possibility of such an occurrence, and he advises that that portion of the inner layer of the gauze which lies opposite to the wound, should be damped with some of the 1-40 carbolic lotion, or else that a small piece of gauze, wrung out of a solution of the same strength, should be applied to the wound, or rather over the protective that is usually placed next to the wound. This small piece of gauze should just be large enough to overlap the piece of protective employed, or where that material is not in use, as in the case of an abscess with a drainage-tube in it, sufficient to cover the wound. It need only be a couple of layers in thickness, in fact, a single layer would be sufficient. Over it, of course, is then applied the ordinary gauze dressing of eight layers. the two plans mentioned above, I think that the one most usually followed by Mr. Lister is the employment of the small extra piece of gauze. In addition to its usefulness in guarding against the possibility of septic agencies being introduced on the surface of the dressings, this small piece of wet gauze has the further advantage that in some cases it may be left as a deep dressing, which need not be disturbed for a considerable time, in fact, after the removal of the stitches, it may be left on until cicatrisation is complete. A deep dressing used in this way protects the wound from the action of the carbolic acid, a point of considerable importance, and in this way favours healing, for carbolic acid itself, though the most favourable agent we have for ensuring an antiseptic atmosphere in the vicinity of a wound, is really an irritant and detrimental to the cicatricial process. It is this character of the acid which has necessitated the use of the protective, which is as far as possible impervious to the acid, and is itself of an unirritating nature.

To return to the point I was alluding to, I would deprecate the custom of using numerous layers of wet gauze of considerable size upon and in the vicinity of the wound, which our object should be to keep as free from carbolic acid lotion as we can. Seeing that this object can be attained by using a small piece of the wet antiseptic material, it is quite unnecessary, and a waste of gauze, to employ such a large quantity as is very frequently done. I say nothing about the soddening influence such a dressing must have, for these masses of wet gauze, covered externally with the dressing containing its impermeable layer of jacconette, must act very much as a poultice would, and interfere with healing. With the view then of attaining quicker and consequently better results, and

also with the aim of saving expense, I think such a practice as the above should be discontinued, or kept within the limits proposed by Mr. Lister, for it cannot be too strongly borne in mind that every yard of antiseptic material used that is not needful is really wasted, and the waste of a single yard at each dressing in every one of the many cases that must be treated in even one hospital during the year represents at the end of

that year a considerable outlay.

6. But this point that I have been dwelling on, namely, the irritating action of carbolic acid when applied externally to a wound, holds equally good with regard to the interior of a wound. It may be laid down as a rule, without any exceptions, that the less carbolic acid there is applied to the inner surfaces of antiseptic wounds the better for them, whether they are in a raw condition, as just after an operation, or whether they are in the more advanced stage of granulation. The reason for this lies in the fact, which must always be kept steadily in view, that the application of the antiseptic agents employed in Lister's method, either to raw or to granulating surfaces, leads to an unusually abundant discharge—in the one case of serum, in the other of pus. This increased discharge, apart from its weakening effect on the patient, necessitates a more frequent change of the dressings, and consequently increased expense in the treatment of the case. It is in points like this that we see how intimately bound up are all the different minutize or details of the antiseptic system as laid down by Mr. Lister, and how necessary it is to carry them out as he advises. I well remember seeing, in student days, a case which illustrated to me, in a way I shall never forget, the ill effects that may be produced by the action of carbolic acid wrongly applied. The case was one of psoas abcess in a young girl. It was supposed to be opened after Lister's method, but nothing could have been farther from the method always carried out by that surgeon. The abscess was opened under a piece of lint soaked in carbolic oil, and evacuated. It was then syringed out with strong carbolic lotion and stuffed with strips of lint soaked in carbolic oil, which were frequently changed, the syringing process being repeated on each renewal of the lint. The result of this proceeding was a most profuse discharge, which soaked through all the external dressings of carbolic lint that had been applied and saturated the bed. In addition to this, the patient's system became poisoned by absorption of the acid, and she suffered from profuse diarrhora and perspirtion, and was in a very exhausted condition. Some of the patient's urine that was collected and allowed to stand became

as black as the ink I am now writing with. Fortunately, the nature of the case was recognized in time to put a stop to the exciting cause of all the mischief, but the case was an instructive one, and it was easy to see how the mischief had arisen. It was the result of not recognizing the fact that Lister's antiseptic system does not consist in deluging wounds with carbolic acid, but in so purifying the air around them, and which comes into contact with them, that no septic agencies can enter and set up mischief in them. The reason that carbolic acid has been selected as the agent for carrying out these objects is, that it has been found to be the most efficacious in destroying the low forms of life on which it seems exceedingly probable all putrefactive processes depend; and in the second place, its volatility renders it invaluable in the dressing of hollow wounds and abscesses. These are the good qualities this agent possesses. Its objectionable one is that, applied to the tissues, it is an irritant, and consequently it excites discharge and delays healing, and we should do all we can to avoid its actual contact with the surfaces of wounds. This fact cannot be too constantly borne in mind. To syringe out an abscess that is being treated antiseptically, either at the time of opening it, or on any consecutive days, or to wash out the interior of an antiseptic wound at the time of an operation, or during the progress of its healing, is both unnecessary and harmful. Unnecessary, because it is entirely at variance with the principle on which Lister's system is founded; harmful, because it sets up increased discharge, serous or purulent, according to the stage in which the wound is, and this increased discharge necessitates the dressings being changed oftener than they otherwise would were the details followed out as laid down by Lister, and in this way increased expenditure is entailed.

7. Another fruitful source of expense lies in employing the antiseptic gauze as a dressing in cases that are putrid. Of course it is desirable, for the sake of keeping sweet the atmosphere of the ward or room where a patient is, to have the wound dressed with some antiseptic material, and it is our bounden duty in every septic case, when it first comes under our care, if it is at all a suitable one, to attempt to correct existing putrefaction and render it aseptic; and while we are making this effort we must employ the usual antiseptic dressings along with all the other precautions; but should we fail in our attempt, it will be found an expensive plan to continue to dress it with the antiseptic gauze. That should be laid aside, and a cheaper and equally efficient dressing used, and we have such an one

in Boric ointment and Boric lint, or the two combined. It keeps down in a very marked degree feetor of the discharge, and being more bland and less irritating than carbolic acid, it produces a diminished amount of discharge, and thus allows of the dressing being longer unchanged. Were this line of practice carried out more generally in hospital work, and the application of the expensive gauze dressing to foul sores discontinued, I am sure that the expense so often laid at the door of antiseptic surgery would be diminished.

8. The last point I would draw attention to is that, in hospital work, some steps should be taken to utilize the gauze dressings after they have been used. Many of the pieces of gauze are of considerable size, especially if care has been taken to make them in one piece, as suggested at the commencement of my remarks, and they only require to be carefully preserved for a few days, when it will be found that there is collected quite a sufficient quantity to make it worth while to have them washed. When washed and dried they might, of course, be re-charged with the antiseptic materials, but I believe that a better plan is to have them torn into strips and made into bandages, two or more strips being sewn together so as to make the bandages of sufficient length. Every one knows, who has used it, what a convenient and pleasant bandage the antiseptic gauze makes, how nicely it applies itself, and how, from its adhesiveness, it retains its place better than a cotton one. Now, though washing the gauze removes from it nearly all the antiseptic materials, there is still left a certain amount of the resin, and a piece of antiseptic gauze that has been used as a dressing, and then washed, can be made into a most admirable bandage. course such bandages are not so nice in appearance as those made from the new gauze, and they in no way contribute to the antiseptic qualities of the dressing, as the new ones often do, but they serve equally well, as I know from experience. The making, too, of these bandages, by sewing the lengths together where necessary, and the rolling of them up, is an excellent source of occupation for the patients, and renders them of some service to the institution which does so much for them. Even in the wards, a supply of such bandages as I have described saves both the new gauze ones and also the calico ones to a very large extent, but it is in the out-patient department of an hospital that they are of most value. Here they can be most usefully employed in the dressing of the many minor surgical cases that are so frequent there, and if each out-patient is made to take away with him, on every

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occasion, his dirty bandage, and bring it back with him, washed and rolled up, when he returns to be dressed, and if no out-patient is re-dressed unless he complies with this regulation, it is surprising how long a bandage made of this washed gauze will last, and to what a great extent the calico bandages of the institution will be saved. In fact, the saving effected under that head alone will be more than sufficient to meet any expense incurred in the washing of the old antiseptic

dressings.

Here I must stop. This paper has extended to a greater length than I intended, although there are still points connected with the economical working of the system to which I might allude, did space allow, neither do I intend to speak of any of the many modifications of the system which have been brought forward with a view of saving expense, for they have not anything to recommend them, as in nearly every case they introduced an element of risk, or were really in direct opposition to the principle on which Mr. Lister's plan is founded. Alterations are not so much needed in the antiseptic system, as more attention to its minutiae, and to such points as I have dwelt on above. In hospital work especially, surgeons, house surgeons, and dressers should all strive to remove this complaint of costliness which is levied against the system, and much can be done by learning it thoroughly, and exercising care and thoughtfulness in what may seem trivial matters. It is with a view of helping on such a movement that I have penned the above remarks; and I believe that, if they were acted upon, they would effect a good deal in the mere matter of expense, apart from other advantages. Of course, expense is a purely secondary matter as compared with the value of human life. Its safety must always be the first consideration, but if the two can go hand in hand, it is only right they should. And I am convinced that the more those who practise the antiseptic system of surgery remember that the minutian of application are all deduced from the germ theory of putrefaction, the more carefully will they work, and the more inclined will they be to follow exactly the mode of procedure advocated by Mr. Lister. Although, as I have already said, the germ theory is a questio rexuta, yet it should be borne in mind that Mr. Lister's recent labours have done much to place the controversy as to "biogenesis" and "abiogenesis" on quite a different footing. It is only necessary to refer to his new facts in reference to the origin of bacteria, and to his experiments, in which he has shown that certain forms of life, found in infusions, represent stages in the life circle of a fungus, to prove what great progress has been made in tracing the connection between the forms of life found in infusions, and the organic germs of the atmosphere and of fluids. In fact, there is no longer any ground for the pompously worded charge brought, by a former Edinburgh professor, against Mr. Lister in the earlier days of his successes, "that, in the management of his cases, he was swayed by the fatal bias of a fixed theoretical preconception."

CASE OF PARTIAL ANNULAR LACERATION OF CERVIX UTERI DURING LABOUR.

BY HUGH MILLER, M.D.,

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A.K., aged twenty-four, single, a primipara, was admitted into the Hospital on 15th April last, and was confined of a female child on the same evening. On admission—and judging from her appearance—the house surgeon described her as a fully nourished woman, well formed, and of the average size. Her family history was obscure. Both her parents were dead, and with the exception of her having strumous enlargement of the glands of the neck when about four years of age, the patient says she had hitherto enjoyed good health. During the first three months after insemination the patient suffered from morning sickness. Her appetite was then impaired, but she partook heartily of the other meals, and enjoyed her food. There was no history of specific disease. On admission, the examination revealed a slight fissure existing on the anterior lip of the os uteri. At that time the os was one-third dilated. and the labour was in every respect a natural one. The presentation was cranial, and in the first position. The whole duration of the labour was not more than sixteen hours. Within twelve hours the first stage was completed; in threeand-a-half hours more the second stage was accomplished, and the third took fifteen minutes. The child was at the full period, and though healthy looking, was still-born. It weighed 53 lbs., was 19 inches in length; the placenta weighed 11 lbs., and the cord measured 22 inches.

On the day succeeding to the birth, a long shred of tissue

was noticed projecting from the vulva; on examination, it was found connected with the anterior lip of the cervix. The patient had a high pulse, with a temperature of 100°. Next day the pulse was quicker, and the temperature 104°. The patient did not complain of pain, nor was the feverish condition otherwise well marked. She appeared to think we were making too much of her illness, when the necessity for an inspection with the speculum was explained to her. On examination, we found a portion of the anterior lip separated for a third of the circumference of the cervix. The strip was about half an inch broad and four inches long. It had a ragged look, and a deep purplish tint. We decided at once to remove the loose portion, and with the hæmostatic scissors cut away the whole of the lacerated tissue. The parts were afterwards freely washed with a solution of carbolic acid. On examining the removed portion under the microscope, it was found to consist of true uterine tissue, infiltrated with inflammatory cells. By next morning the temperature was almost normal, and the patient made a rapid recovery. Eight days after the operation, the parts were again examined with the speculum; the lacerated surface was then almost whole. On the fourteenth day from admission, she left the hospital quite recovered.

This is an unusual accident in midwifery practice, and is one very rarely met with in an otherwise perfectly natural labour. It may be observed that the head was not a large one, that the os was not rigid, and that the first and second stages were not tedious, nor was any manual or instrumental interference required. Although the patient had no remembrance of a mechanical injury while pregnant, it is probable she sustained one, and that the fissure detected by Dr. Black on admission was due to this cause. It is not so easy to account for the laceration taking a circular form, unless on the supposition that the lip was caught by the descending occiput, and impacted between head and pubis so tightly as to permit of the tearing taking place during a pain. The fœtus being dead might also assist in producing it. This case, at all events, shows the facility with which uterine tissue may give way when once a breach of surface takes place.

CURRENT TOPICS.

THE MEDICAL ACTS AMENDMENT BILLS.

It is now generally understood that this whole matter will be referred to a Select Committee, and that there will therefore be no legislation during the present Session of Parliament. This result is acknowledged to be mainly due to the opposition of the Scottish Universities and Corporations, and it may be fairly said that the most important item in that opposition is a masterly "STATEMENT on behalf of the UNIVERSITIES of SCOTLAND," drawn up, we believe, by a well known Glasgow Professor. It is difficult, within the space at our disposal, to give any just conception of this document, the argument of which seems to us perfectly unassailable, but we shall endeavour, with the aid of a few quotations, to give our readers some idea

of its general drift.

The Bills introduced last Session and this, by the Duke of Richmond, have been variously modified in their course through the House of Lords, under the influence of various interests, and "Thus it happens that the Medical Acts Amendment Bill, as introduced this year by the Duke of Richmond, forms one of a series of what the authors of the present Statement consider to be extremely rash and ill advised experiments in medical legislation, following no clear principle, but moulded according to the form and pressure of various contending interests, of which the numerical majority happens to be in England." It is pointed out that the Bill had been mainly framed or altered under the inspiration of the strong English Corporations, while the Scottish Universities, having less local and personal connections at the seat of Government, have not received due consideration. But this "Bill is an invasion of rights and privileges long possessed by the Scottish Universities, and confirmed by legislation so recently as 1858." And further, "It is not alleged that the Universities have forfeited these rights and privileges through neglect or misconduct. What is alleged is that because the English Universities and Corporations have agreed upon a scheme suitable for England. whereby something that is fallaciously set forth as 'uniformity of qualification' is to be attained—therefore Scotland, with a wholly different system both of teaching and examination, must needs be compelled to follow a similar scheme, even at the cost of dislocating and disturbing, and certainly injuring, the flourishing institutions which are at present, beyond all question, among the most successful and efficient schools of

medicine in this country."

So much being said by way of introduction, there is a systematic discussion of three points in the Bill, which are stated thus: - "1st, That the kind of 'uniformity' proposed under the Bill is not desirable, and, even though it were desirable, not likely to be attained. 2nd, That so far as the Universities of Scotland are concerned, a general high level of qualification is already secured in a manner far preferable to the minimum uniformity proposed under the Bill. 3rd, That the true object of medical legislation ought to be, not uniformity but efficiency, and at the same time a spontaneous, and, so to speak, elastic capacity of gradual development and improvement, both as regards education and examination." Under the second head it is shown that the requirements of the Scottish Universities are, at present, very decidedly higher than those proposed under the Medical Acts Amendment Bill, while "as regards clinical examinations, and indeed the more practical examinations in every department, the Scottish Universities have, for many years, been in advance both of the Corporations and of the recommendations of the General Medical Council, so that their influence has been felt in raising the standard of the other bodies, and of the Medical Council itself." The concluding paragraph of this section puts the matter in a most convincing light. "It must be borne in mind that the teaching of medicine in the Scottish Universities merely follows the universal experience and practice of European countries, that medical men are best trained at University seats. England has made itself an exception to this general practice by instituting private schools in connection with hospitals in London and elsewhere, apart from the Universities. It is not denied that the conditions of the Bill may be adapted to this exceptional system, but this admission involves also the obvious corollary that the Bill, while proceeding wholly upon English lines (so to speak), is thereby entirely unfitted for the system of professional training adopted in the Universities of Scotland, in conjunction with the clinical teaching at our great hospitals."

In discussing the question as to the "true object of medical legislation," the Universities say that "they are far from objecting to an inspection or supervision by the Medical Council of their examinations, either with the present or with enlarged powers." "Nor would the Universities object to a reasonable increase in the number or influence of their

non-professorial examiners; or to these being nominated in part by a body independent of the Universities themselves." "But, while favourable to any scheme which shall preserve or increase the efficiency of the existing examinations, the Universities object strongly to replacing these as licenses to practice by a new examination conducted by an entirely distinct board of examiners; inasmuch as they believe that the influence for good of examinations is largely connected with their reflex influence on teaching, and it is only by keeping these in harmony with each other that the best results can be attained." We would strongly homologate the view contained in the last clause of this quotation. We have often insisted that the examinations ought to be checks rather on the teachers than the students, as it is much more important that the student should be taught well from day to day in his class than that he should be induced to make a spurt at certain seasons to pass his examinations. This we believe to be the great advantage of the Scottish University system, so far at least as the medical schools are concerned.

On the STATEMENT itself there follow three appendices, the second of which contains extracts from the Lancet and British Medical Journal on medical teaching in Scotland, &c. The article from the Lancet contains the following:—"One other element in the explanation is the existence of a class of medical teachers in Scotland 'to the manner bred,' if not 'born.' They have the same love for teaching that other men have for practice. They regard it, more than English teachers do, as a life calling to which practice is to be subordinated." In the article from the British Medical Journal occur these very striking remarks:—"At present, teaching seems to be considered as a thing so easy, so unimportant, or so devoid of technical art, that every one in a hospital or a medical school who aspires to practice, is apt to be dubbed a teacher summarily, and in whatever subject it is most convenient that he should teach. A curious theory has grown up, that every hospital must teach the whole range of medicine, surgery, and its collateral sciences through the mouths, in almost every instance, of members of its practising staff; and teaching has come to be considered, not as a great profession requiring careful training, personal aptitudes, and worthy of satisfying great ambitions, but as a temporary stepping-stone, to be skipped over lightly, or as a necessary evil to be endured by those who would fight their way through this and many other unavoidable discomforts to a successful position in consulting practice. It is not so in any other country in the world; and if it be so in London, it is because London alone, of all the great cities of Europe, is destitute of a teaching university." While giving expression to these sentiments, it seems altogether strange that the two leading *Journals* should lend their aid to such a Bill as that now before Parliament.

DR. DOBELL'S WORK ON LOSS OF WEIGHT, BLOOD SPITTING, AND LUNG DISEASE.—We have received from Dr. Dobell, too late for publication in last Number, a letter, in which he objects to certain points in the review of his work which appeared in our April issue. He says "Several mistakes occur in statements of facts, which I shall be greatly obliged if you will correct in your next Number.

"1st, It is made to appear that I account for all hamoptyses in consumption by damage to the finest vessels, &c., whereas, you will see by the enclosed quotations (No. 1), that I only so explain the *initial hamoptyses*, and I have given ample explanations, at other parts of the book, of the other phases of hamoltons,

moptyses. (See p. 25).

"2nd. In stating my hypothesis of tuberculosis and tuberculisation, the reviewer has copied only that passage which I quote from my original papers, and has omitted the very important correction of that passage, given in the succeeding

sentence. (See quotation No. 2 enclosed).

"3rd. It is certainly a misrepresentation of the statements contained in my book, with reference to the treatment of consumption, to make it appear, as the reviewer does, that it is summed up in the administration of pancreatic emulsion, or of fat of any kind. He could hardly have read my discussions of the use of arsenic, quinine, chloride of calcium, carbolic acid and other antiseptics, diets, climate, altitude, &c., or the summary in the last page of the book. (See quotation No. 3)."

We have read the enclosed quotations, which it is unnecessary to give here. Dr. Dobell's letter was placed in the hands of our reviewer, and we have obtained a reply from him, also containing references to quotations. It would occupy too much of our space to quote sufficiently on one side or the other, and we can only endeavour to embody our reviewer's statements in as few words as possible. Taking Dr. Dobell's accusations in

order.

1st. Our reviewer writes—"You will see, by reference to the notice in the Journal, that it is only the initial hemorrhage to which I refer, and not all hemorrhages in tubercular cases. This is made quite clear by the reference to 'phthisis ab

hæmoptoe,' which, of course, can only apply to the early hæmorrhages." Dr. Dobell's first contention thus breaks down

entirely.

2nd. The second statement by Dr. Dobell has more in it than the first. He accuses the reviewer of quoting a passage taken from an earlier paper without the important correction in the sentences which follow in the present work. The sentence which immediately follows is—"Now, the whole of the above holds good in the light of modern research, except the giving the name tubercle to the disintegrated albuminoid material;" and he admits, further on, that there is no change of front in his later views, but "an important change of form." It might have been well had our reviewer stated this difference in later views from earlier; "but," he says, "the change of form seemed to me so unimportant, that for all practical purposes it might have stood as it was. It does not appear to assimilate his theory any better with the results of pathological inquiry."

3rd. In regard to the last accusation by Dr. Dobell, we shall simply quote our reviewer's remarks. He says that "The other modes of treatment are common, and therefore I did not mention them; but this method, by fats, is put in the forefront, and made so much of, and the author is evidently so self-satisfied with it, that it naturally called for special mention"—"I only gave prominence to what was more special in Dr. Dobell's

treatment."

With this, we leave it with our readers, who will probably conclude that, if our reviewer has been a little too categorical in some of his statements, Dr. Dobell has no serious ground of complaint as to the general tenour of the article.

Ed. G. M. J.

REVIEWS.

Papers on the Female Perineum. By J. Matthews Duncan, A.M., M.D., L.L.D., F.R.S.E., Obstetric Physician to St. Bartholomew's Hospital. Pp. 156. London: J. & A. Churchill. 1879.

PROBABLY the cause of science is more truly advanced by a short record of careful observation than by a large volume of theory, however good in its way. On this ground many will

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value this little book by Dr. Duncan. It is a collection of papers published at different times and in different journals, furbished up, so as to form a passably well connected series of twelve chapters. The first opens by giving a minute description of the anatomical relations of the parts concerned, especially calling attention to the distinction between the fourchette and the vaginal orifice, and pointing out the fact that, while in first labours, the former sometimes escapes rupture, the latter, in the experience of the author, never does so. In referring to lacerations of the middle part of the vagina—which are longitudinal in direction, and caused by over distension of the canal—as distinguished from those of the upper and lower portions, the author remarks, "It would appear that, in the Darwinian progress of the species, the head of the fœtus has increased in size more rapidly than the orifices and passages through which it has to come have increased in size or dilatability. For it can scarcely be supposed to be a final arrangement that the cervix uteri should be torn so often as it is in giving passage to the child; and the same may be said of lacerations of the vagina, the vaginal orifice, the vulvar orifice, and of the perineum."

The posterior laceration of the vaginal orifice is considered "inevitable," and it is noted that others may, and do, often occur on either side of the orifice anteriorly. In the cases related by Dr. Duncan, the left side is more frequently the seat of the tear than the right, and this is accounted for by the fact that most heads are born in the first position, and that the left parietal tuberosity passes along with the bulk of the head and so tears the left side. In this way also he explains the greater frequency of perimetritis, parametritis, and phlegmasia dolens on the left side. There is also pointed out the fact, not, we think, commonly known, that vestibular lacerations, which correspond anteriorly to lacerations of the perineum posteriorly, are not uncommon—so common indeed that he noted them in nineteen out of twenty-five cases—and thinks that however close the connection between laceration of the perineum and the necessity for catheterism, the connection between the latter and vestibular laceration is even

closer.

The chief causes of rupture mentioned are—1st, Rottenness of tissue, as in syphilitic women; 2nd, Previous inflammation

of the perineum; and 3rd, Too rapid dilation.

In regard to the more frequent rupture of the posterior parts, it is explained that the mesial line of the perineum is probably the weakest part, and that the direction of the propelling power is such as to bring the greatest strain to bear on that region. In connection with this, the author, who, by the way, is a strong upholder of the practice of supporting the perineum, says, "Two important elements in the causation of laceration are susceptible of modification with therapeutical objects by the practitioner, namely, time and direction. The accoucheur can prevent the precipitate expulsion of the child, and its attendant evils. He can, by supporting the perineum, modify the direction of its advance, and resist any undue pressure, posteriorly or inferiorly, arising from the curvilinear motion of the feetus."

The injury by laceration is usually stellate in character, but may be parallel to the margin of the distended orifice. is considerable notice taken of central rupture of the perineum, and it is pointed out that such cases are frequently misunderstood. Dr. Duncan thinks that it is a very rare thing for a child to be thrust out through a central rupture, and that if it were so, the rupture would be thereby converted into an ordinary one, involving the whole perineum. The corium may yield while the epithelium remains entire, and in this way resemble the skin of the abdomen and mammary glands, where the scars show the extent of the laceration which, in these situations, never extends to the epithelium. The skin may tear without involving the deeper parts, or these may be torn without involving the skin, and the fact is also noted that central perineal ruptures may be simulated by the union of only the anterior part of an ordinary perineal rupture. Lastly, in this connection, there is noticed simple recto-vaginal rupture and sloughing of the perineum, a very curious case of the latter being given where the child was delivered by turning, and there had been no continuous pressure on the perineum.

There is then taken up the subject of the relations existing between the fœtal head and the perineum, showing that it is the suboccipito-frontal diameter of the head which is most injurious to a rigid perineum. It is also proved from the measurements—taken by Budin—of the heads of newly-born children, that perineal resistance modifies greatly the shape of the head at birth, and in this way the greater mortality amongst

the male children of primiparae is accounted for.

Here ends what may be called the first division of the book, the remaining four chapters being devoted to procidentia of the pelvic viscera and the restoration of the perineum as one of the valuable aids to cure. The author thinks that stays, or anything else which compresses the upper part of the abdomen, provokes this disease. Slight cases are to be treated by rest in

the horizontal position, avoidance of hard work, and long standing or straining at stool, diminution of the weight of the uterus, cure of leucorrhea or menorrhagia, and the use of all means for increasing the retentive power of the abdomen. In more aggravated cases the disc and stem pessary with the T bandage is recommended. Before going on to describe the operation for restoring the perineum, Dr. Duncan gives it as his opinion that laceration of that structure has nothing further to do with procidentia than by making its progress more rapid, after other causes have set it agoing, and that restoration of the perineum does good only by supplying an appropriate bearing for the pad of the T bandage. The operation is often undertaken in cases where the perineum has never been lacerated but only greatly dilated. It is pointed out that the operation should never be attempted in very old women, or those who are decidedly syphilitic, or where the perineum has recently been inflamed, for in such cases the tissues are exceedingly apt to give way. The delayed operation is thought, by the author, to give slightly better results. The last chapter is devoted to a pretty minute account of the method of operating recommended, which is chiefly remarkable for its simplicity. Dr. Duncan, however, says of it that it is "very successful and satisfactory."

The work is illustrated by two or three woodcuts; that on page 84 would have been greatly improved by possessing a shade line instead of the comparatively meaningless one

employed.

To those specially interested in the subject this will be not only an interesting but valuable book.

Manual of Practical Chemistry. By A. WYNTER BLYTH, M.R.C.S., F.C.S. London: Charles Griffin & Co., 1879.

WE welcome with considerable satisfaction the appearance of this Manual of Practical Chemistry. The author, who has already done good service by giving to us an excellent Dictionary of Hygiene, now increases our obligations to him.

The book consists of two divisions: the 1st, consisting of 237 pages, is devoted to the analyses of the principal articles of diet; and the 2nd, consisting of 216 pages, treats of the detection and estimation of poisons. It therefore possesses an interest to the student of chemistry and the analytical chemist, while to the medical officer of health it has a special interest, since it gives him, in one volume, an amount of

information upon subjects connected with his work which he could not before readily obtain without consulting a large number of volumes, and without a knowledge of the work done by Continental chemists.

In the portion devoted to analysis of foods we have, first, an introductory chapter, in which is stated the methods which are adopted for estimating the amount of the constituents of the ash in organic compounds, the amount of starch and sugar, and the microscopical appearances of starch grains obtained from various sources.

In part II, we have a section devoted to the analysis of wheaten flour and bread, and the best methods of detecting the

adulterations usually practised.

In part III, we have the analysis of milk, butter, and cheese. The section devoted to milk contains not only a full account of the constituents of the fluid, of the adulterations and the methods of quantitatively estimating them, but also a short account of the effects which have been observed to follow the drinking of milk obtained from animals suffering from foot and mouth disease, phthisis, &c. The possibility of milk being the vehicle by which the infective material of enteric and scarlet fevers is carried from place to place is admitted by Mr. Blyth, but he says—"Some of the instances cited are, however, to the writer's mind untrustworthy, and narrated by observers who appear, before they commenced their investigation, to have resolved to accuse and convict the milk." This may be true, but to our mind a large number of epidemics of enteric fever have been observed in which the distribution of the cases and other evidence seemed without doubt to point to milk as the medium of propagation.

In part IV, the subjects tea, coffee, and cocoa are considered. In the section devoted to tea, after a short account of the constituents present in it, of the microscopic appearance of the leaf, and the difference between it and that of the leaves used as adulterations, we have an account of the methods of estimating the amount of theine; (1) the method by treating a decoction of the tea with lime or burnt magnesia, evaporation to dryness, and subsequent extraction of the alkaloid by chloroform; (2) a method by simple solution of the alkaloid by chloroform; and (3) the method by sublimation proposed by Mr. Blyth in 1877. For the estimation of the amount of tannin and other astringents, Löwenthal's process is recom-

mended.

Part V is devoted to a consideration of alcohol and alcoholic liquors. The methods of estimating the amount of alcohol and

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for the detection of impurities are explained in a clear and concise manner.

Parts VI and VII are devoted to the condiments.

In the division relating to the detection of poisons, only those substances are considered, the detection and analysis of which are attended with difficulty. After an account of the method to be adopted in attempting to analyse organic fluids and solids, the author considers the poisons which are mainly separated and detected by distillation methods. Under this head hydrocyanic acid, chloroform, chloral, and phosphorus are considered. Among the methods for the detection of phosphorus in cases of poisoning, we have Mitscherlich's process; the process by distillation in the dark, the process for the conversion into and the detection of phosphate of silver, and the test first described by Wöhler in which the phosphorus is recognized by its communicating a green colour, and a characteristic spectrum to the hydrogen flame. Blondlot's apparatus for the generation of the hydrogen, and the combustion of the phosphorus, is figured. Although the examination, by the spectroscope, of the flame in which phosphine is burnt is undoubtedly the most delicate test which we possess for the detection of phosphorus, yet the examination of the spectrum is by no means so easy as one might suppose to be the case, after reading an account of the method to be adopted. The organ to be tested is introduced into a vessel through which hydrogen is passed. To this vessel heat is applied, and, if any phosphorus be present, it is given off in the form of phosphine, which escapes along with the hydrogen through a platinum jet. To this jet a light is applied, and the flame examined by the spectroscope. It is to be regretted that the author does not mention the difficulties in connection with this test. These arise from two causes: 1st, in the majority of cases, and in probably all the cases of poisoning by phosphine, the amount of phosphorus in the tissues of the body is so small that, in order that the test may be of service, it is necessary to examine the flame by the spectroscope within a very short time from the lighting of the jet containing the gas; and, 2nd, owing to the heating of the animal fluid or tissue, or from some other cause, the phosphine is given off irregularly, its liberation is accompanied by frothing of the fluid, and this frothing is frequently so excessive as to block up the orifice of the jet, and interfere with the escape of the gases. case the liberation of the phosphine is apt to be irregular, and the jet unsteady, and this at a moment when it is of the greatest importance that the flame should be regular.

Following the consideration of the above poisons we have the alkaloids and vegetable principles which are mainly separated by alcoholic solvents. Under this are included the alkaloids, opium, nux vomica, belladonna, &c.

Then follows a section devoted to animal poisons, and lastly, a section to the principal inorganic poisons, special attention

being directed to arsenic and mercury.

Not the least important part of the book is the list of references to papers contributed on the subject, these papers being classified, and a list added at the end of each section of the *Manual*. It is supplied with a good index, is neatly bound, and of a convenient size. In conclusion, we are of opinion that the *Manual* will be found to be extremely useful, as a book for reference, by those medical men who, in the discharge of their duties, require to perform analyses of foods or poisons, or to express an opinion concerning the value of the tests employed for the detection and estimation of adulterations or poisonous substances.

Atlas of Histology. By E. Klein, M.D., F.R.S., and E. Noble Smith, L.R.C.P., M.R.C.S. London: Smith, Elder & Co. 1879.

THE subject of histology is one peculiarly suited for pictorial illustration, but in order to this being efficiently done, two things are requisite; first, the preparations chosen must be thoroughly illustrative, and so prepared as to bring out the essential characters of the tissues; and, second, the drawings must be rigidly true to nature. We are able to assure our readers that both of these conditions are fulfilled in the present work. To Dr. Klein's well known skill in histology we are indebted for the careful selection of illustrative specimens, while the reproduction of the appearances, in the plates by Mr. Noble Smith, presents the highest degree of excellence.

The plan of the work is to give a systematic description of the tissues, the text being divided into chapters. Each chapter is illustrated with appropriate plates, and occasional woodcuts. At the end of the chapter there is a full description of the plates illustrative of it, and this description generally occupies more space than the chapter itself, which, in fact, is only an introduction to the plates. This is a singularly good arrangement, as the reader obtains in the systematic chapters a concise statement of the histology of the structure concerned, and is

thus able to appreciate the more minute descriptions of the plates.

Of the general scope of the work, the following extract from

the preface will give some idea-

"The subject-matter will be treated in this order:—First, the elementary tissues—blood, epithelium and endothelium, connective tissues, muscular tissue, the nervous, vascular, and lymphatic system; then follows a short chapter on 'cells in general,' after which the compound tissues will be treated seriatim; the alimentary canal and its glands, the respiratory organs, the urinary and genital organs, the skin and special sense organs. The concluding chapter treats of organs, the nature of which is not sufficiently well known, as the suprarenal capsule, the thyroid, and coccygeal gland."

In the three parts which we have received, a considerable amount of ground has already been gone over. We have chapters on Blood, Epithelium, Endothelium, Connective tissue corpuscles, Fibrous Connective tissue, Adipose tissue, Pigment

cells, Cartilage.

Any one desirous of obtaining a graphic rendering of the most recent observations in this department of science, would do well to purchase this atlas, whose cost is exceedingly moderate, considering the character and extent of the work expended on it.

REPORTS OF HOSPITAL AND PRIVATE PRACTICE.

WESTERN INFIRMARY.

UNDER THE SUPERVISION OF DR. W. G. DUN.

FROM DR. M'CALL ANDERSON'S WARDS.

TWO CASES OF PLEURITIC EFFUSION TREATED BY PARACENTESIS THORACIS WITH SOUTHEY'S TROCAR AND CANULA.—On 13th May Dr. Anderson showed to his class a case of extensive pleuritic effusion. The patient, a young man aged 26, had had an attack of acute pleurisy about nine months ago, and, when admitted into the Infirmary, there were all the indications of excessive fluid effusion into the left pleura; there was a certain degree of bulging of the left side, the heart was seen pulsating

in the right mammary region, the liver was displaced, and all the other physical signs usual in such cases were present. As there seemed no likelihood of the fluid being absorbed, Dr. Anderson determined to perform paracentesis thoracis. this operation one of three methods, he said, might be selected. 1st. The use of the ordinary trocar and canula; 2nd, aspiration; and 3rd, Southey's trocar and canula. This last was the method adopted. A piece of fine india-rubber tubing was attached to the canula, and the trocar passed through the tubing into the canula, the hole made by the slender trocar being so small that, on the withdrawal of the trocar, the tube is practically uninjured. To the canula a small loose fitting shield is attached, in order to keep it in position once it is introduced, the shield being fixed to the skin with strips of plaster. The trocar and canula were inserted into the pleura through one of the intercostal spaces, at a point about an inch below the inferior angle of the left scapula, the skin here having previously been frozen by the application of ice and Immediately on the withdrawal of the trocar a clear greenish-coloured serous fluid flowed from the india-rubber tubing, and continued to flow for four hours, 92 oz. in all being discharged.

The operation recommends itself by the simplicity and convenience of the instrument used, by the ease with which it is performed, and by the slightness of the pain it causes the patient; and the slowness of the operation is, in itself, an advantage, as it allows the displaced organs gradually to

resume their normal positions.

In addition to the above case, Dr. Anderson has at present in his male ward a little boy, aged 9, upon whom he operated, a short time ago, in the same manner as above described, withdrawing 12 oz. of fluid from the left pleura. This case has done very well, and time only is required to effect a complete recovery.

NOTES OF CLINICAL LECTURE ON CASE OF SYPHILITIC PARALYSIS OF SIXTH CRANIAL NERVE, &c.—In a recent clinical lecture, Dr. Anderson directed the attention of his class to the case of an old man, aged 62, a brass worker, who had been admitted to the hospital on 25th April, 1879. We do not attempt to give more than an outline of the lecture.

Patient's parents, brothers, and sisters are all dead from unknown causes, but he himself, although intemperate in his habits, appears to have enjoyed good health until about ten months ago, and this illness he attributes to working much amongst red lead. At that time he began to suffer from double vision, and from pain in the left side of the head, extending to the left ear, and soon after involving the left eye. It does not seem to have altered much in severity since its commencement, but is always most troublesome at night. About four months ago he began to experience a peculiar prickling sensation in the left side of the face, and, about the same time, it was ascertained that his sense of hearing was much impaired, especially on the left side. Otherwise, he makes no complaint; his appetite is good, his temperature normal, and he is tolerably healthy looking.

After relating the history of the case, Dr. Anderson next proceeded to direct attention to the various points of interest involved in it, and, the patient being present, these were veri-

fied by one of the students.

1st. Pain. This proceeds from the left ear forward to the left eye, is constant, often exeruciating, and always worst at night.

2nd. Altered state of vision. Patient has double vision, any object seen to the left of the middle line appears double, but seen to the right it is single. It was also shown that both eyes followed any object carried towards the right, but that when carried towards the left the left eye failed to move in that direction, showing that the external rectus muscle of the left eyeball is paralysed, and pointing thus to some lesion involving the sixth cranial nerve. Although it often happens that when one of the nerves supplying the muscles of the eye is paralysed, the others are also affected, yet in this case the sixth nerve is alone affected.

3rd. Condition of the ears. The ticking of a watch is heard with the right ear at the distance of an inch, with the left ear only on contact, and the sound of the tuning fork is much better heard when the instrument is applied to the forehead than when placed close to the ear, indicating disease of the conducting apparatus rather than any primary disease of the internal ear. On inspecting the left ear with the aural speculum, the membrana tympani is seen to be white and papery, but the Eustachian tube of the same side, as tested by the catheter, is found to be unaffected.

4th. There is reason to suppose that some of the sensory filaments of the fifth cranial nerve are involved, there being a slight degree of diminished sensibility around the chin on the left side, agreeing to some extent with a sensation of prickling experienced by patient at this part. The motor branches of the fifth nerve are unaffected, the seventh nerve is also unaffected, and there is no paralysis of the body.

Seat and nature of lesion. There is no doubt that in this case we have to deal with a double lesion; the deafness is due to chronic catarrhal inflammation of the mucous lining of the cavity of the tympanum, but in addition to this there is a deep lesion on the left side at the base of the brain, or base of the skull, implicating the sixth nerve in its course, and involving perhaps slightly the fifth. As to the nature of the lesion; the case did not come under Dr. Anderson's observation till some time after admission, and the symptoms appear to have been regarded as due probably to lead poisoning, the patient having been working amongst red lead. Dr. Anderson is, however, not of this opinion, there being an absence of the symptoms usually present in lead poisoning, such as colic, wasting of extensor muscles of forearm, wrist drop, and blue line on gums. There is, however, good ground to suspect that the case is essentially syphilitic, old standing syphilis being very apt, as we know, to produce paralysis of the muscles of the eye, and this view of the case is further strengthened by the slight implication of the fifth nerve, as well as by other concomitants which an investigation of the case reveals. namely, marked aggravation of the pain at night, enlargement of the glands of the groin and those in the posterior triangle of the neck; distinct node on the left tibia and deep cicatrices all over the fauces.

Prognosis. Cure of deafness not expected. Paralytic

symptoms may moderate or altogether disappear.

Treatment. From 26th April till 9th May patient had been having bromide of potassium, but without benefit; the treatment is now altered to iodide of potassium in 20 gr. doses thrice daily, to be continued for two or three weeks. If at the end of that time the symptoms still continue, this by no means proves that the case is not of syphilitic origin, as secondary changes may have occurred as a result of irritation around the syphilitic lesion.

FROM DR. MACLEOD'S WARDS.

SUCCESSFUL TREATMENT OF TWO CASES OF UNUNITED FRACTURE.

—Case I.—M. W., aged 20, is that of a strong healthy looking young woman, and was admitted on 30th March, 1879. When three years old she fell and fractured her left tibia at the middle. Seven months after the accident a portion of the shaft of the tibia, about three inches in length, was removed, a large abscess having previously formed, and the bone having died. The wound healed up completely but the bone never united. For

four years she required to use crutches, but since then she has been able to walk without artificial support. Three weeks before admission she stumbled while walking, causing some pain and swelling at the seat of fracture. On admission it was found that the left leg was about three inches shorter than the right. The fibula was shortened, very much thickened, and strongly curved outwards and forwards. The lower fragment of the tibia was greatly atrophied, while the upper one retained nearly its normal size. The fractured ends of the bone rode over one another and were widely separated—movement was quite free. A very deep cicatrix existed between the ends of the fragments. There was no tenderness on manipulation, and the patient could bear the weight of her body,

without pain, on the fibula alone.

On 2nd April, Dr. Macleod operated to remedy this unfortunate condition. An incision was made through the old cicatrix down to the seat of fracture, and the ends of the fragments exposed. They were found to be rounded, smooth, and covered with a layer of cartilage. The ends of both fragments were removed obliquely by the saw and chisel, so as to fit one another, and holes having been drilled in the end of the fragments, they were fixed in apposition with strong silver wire. A small incision was next made on the outer aspect of the limb down to the fibula, which was fractured at the junction of the middle and lower thirds, chiefly by the aid of the chisel. The limb was now put into proper position, and fixed in a Macintyre splint. The whole operation was performed under the spray, and at every subsequent dressing the usual antiseptic precautions were employed.

The case progressed remarkably well, consolidation soon taking place. The Macintyre splint was, early in the case, replaced by a half box splint. On 12th May, the wire suture uniting the ends of the tibia was removed, and at this date pretty firm union had taken place in both bones. The limb is quite straight. The wound over the fibula is closed, and that over the tibia is nearly whole. The general health of the patient continues quite satisfactory, never having been in the least

disturbed by the operation.

Case II.—W. W., aged 36, a sailor, was admitted 13th March. 1879. Eleven months before admission patient fell into the hold of a vessel, and broke his left humerus about the middle. The arm was put up by a medical man with an internal rectangular splint and small junk outside splint. After a week this apparatus was removed, and a plaster of Paris bandage applied to the upper arm only. This was put on so loosely

that the arm could be moved freely within it. At the end of six weeks the plaster was removed, and the bone was found to be quite ununited. Since then no apparatus has been used. When

admitted the arm could be moved about like a flail.

On 19th March, Dr. Macleod operated. An incision about two inches long was made on the external aspect of the arm, and about its middle. This penetrated to the bone. The ends of the fragments were found fully half an inch apart, with strong intervening ligamentous bands. These were cut across, the ends of the bone exposed, and a small piece cut off from both with the bone pliers. Solution of chloride of zinc was freely applied, and great care was taken that no fragments or other foreign body got between the ends of the bone. A poroplastic splint, with binding screw at the elbow, was applied. This splint grasped both the upper and forearm, the latter being flexed and brought across the chest. Additional smaller pieces of poroplastic were applied over the seat of fracture, and a large piece of the same material enveloped the shoulder and extended down the arm. The fragments were thus perfectly fixed.

The case was regularly dressed, and on 5th April, the continuity of the bone was tested and found to be proceeding favourably. The wound was nearly healed. From time to time the binding screw had been loosed, and the elbow joint put into motion. At this date he became an out patient. On 14th May he again presented himself, the wound was found quite healed, and the bone very firmly united, only a slight degree of mobility existing. The splint in use up till now was discontinued, and short splints applied at the seat of fracture, the arm being firmly bandaged from the hand to the shoulder and supported by a sling. The patient was instructed to move his fingers and forearm occasionally. The movements of the

elbow and shoulder joints were found unaffected.

GLASGOW ROYAL INFIRMARY.

UNDER THE SUPERVISION OF DR. J. WALLACE ANDERSON.

FROM DR. PERRY'S WARDS.

TWO CASES OF LOCAL SPASM CONTRASTED—THE ONE RESEMB-LING ATHETOSIS, THE OTHER A CASE OF TETANY.—The first case, at present in ward 4, is that of a young woman, at. 26, who, since her infancy, has been affected with a peculiar

spasmodic flexion of the fingers of the right hand, accompanied by choreic movements of the fingers; the right foot is somewhat similarly affected, though to a less extent. undisturbed, the hand lies with its palmar surface on her lap, the fingers pretty well extended and the thumb but slightly drawn in. On directing attention to the hand, involuntary movements of the fingers begin, with perhaps a slight increase of the flexion, but immediately on her lifting the hand, the fingers become strongly flexed and drawn together, and the thumb rigidly adducted across the palm. By a strong effort of the will she may succeed in extending one finger, and perhaps a second, but generally the greater the effort, the greater the spasm, and the greater the choreic movements. When the effort, however, is somewhat relaxed, the hand will suddenly become extended, although the fingers will still be rigid and contorted in the most grotesque fashion. When in this state the case closely resembles one of athetosis, as described and figured by Hammond in his work on the Diseases of the Nervous System. It answers to his general description of the disease, inasmuch as "it is mainly characterized by an inability to retain the fingers and toes in any position in which they may be placed, and by their continual motion." At the same time it differs from athetosis in several essential features, and the further account of the case will probably best be given by referring to these. She has been so affected since her infancy, and no cause can be assigned. There is no history of any form of nervous disorder, and her general health is, and appears always to have been, fairly good. She never has any pain, aching, or numbness in the affected limbs, nor is there any impairment of cutaneous sensibility. There is no indication of any mental peculiarity; intelligence, memory, temper, &c., appear normal. But, in particular, her difficulty is not to flex the fingers but to extend them, and the choreic movements are diminished, or perhaps even abolished, not by any effort of the will, but, on the contrary, by the attention being directed to something else. Lastly, all the symptoms disappear during sleep, which further distinguishes the affection, it would appear, from athetosis. The foot and toes are implicated to a slight extent, but on the extensor surface. When she walks the toes are drawn upwards—the great toe particularly-so that they do not readily touch the ground. While this is the opposite surface to that affected in the upper extremity, it is also the opposite to that in one, at least, of Hammond's cases. "The toes," he says, referring to his second case, "were ordinarily in a state of flexion, so as to

present their ends to the floor." The muscles of the affected limbs are firm and rigid, and, if anything, are more fully developed than those of the normal side. This is to be expected from the almost constant muscular action, and, for the same reason, is found also in athetosis. But it is interesting to note that this has occurred notwithstanding the fact that the affected hand and arm have always been much weaker than the other; "not quarter the strength," she says, although this expression will hardly bear a literal interpretation. There is but little difference, in this respect, in the lower limbs; it is only when she walks a long distance that any weakness of the right leg is perceptible. The patient is getting the arseniate of iron, with extract of conium and gentian, and the galvanic current applied daily.

The other case we saw at the Medical Dispensary, and, as the patient unfortunately did not return, our account of the symptoms is necessarily very imperfect. He was a pretty healthy looking boy, suffering only from the one complaint, which was evident enough, as both arms and hands were in a state of the most marked tonic spasm. The fingers and thumb of each hand were themselves almost straight and adducted, but semi-flexed on the palm, and quite rigid, giving the whole hand a conical shape. The hand itself was slightly flexed on the forearm, and the latter at right angles with the arm, all the muscles being tense and firm. The limbs were evidently in a state of tonic spasm, over which the boy had But the characteristic feature of the case, and what distinguishes it from the preceding, was that the attack had only lasted for about an hour, and even this was the longest he had ever had, so far as the teacher who accompanied him knew. He had taken two before at school, but on both occasions the attack had lasted only a few minutes, being cut short apparently by having the hands and arms forcibly extended for a minute or two. So far as can be judged from the scanty information supplied by the teacher, it was a case of intermittent tetanus or tetany, as suggested first by Corvisart. An excellent description of the disease will be found in Trousseau's Clinical Medicine, vol. i, translated by the New Sydenham Society.

From Dr. Morton's Wards.

CASE OF EXTREME CONTRACTION OF FLEXORS OF FOREARM, &C., CONTINUED.—In connection with the cases described

above, it may be interesting to note the further progress of the case referred to at page 153 of the present volume, where a deformed oblique fracture of the humerus had caused extreme contraction of the flexor muscles of the forearm, with considerable rigidity, presumably from pressure on the median nerve. Shortly after admission, Dr. Morton removed the projecting fragment of the humerus, and commenced gradual extension of the arm by the suspension from the hand and fingers of a small weight, while the fingers were further supported by a pad placed in the palm. The wound healed kindly in a short time, and at intervals of a week or two the hand and forearm were extended gradually under chloroform, the weight continuing to be suspended from the hand while the patient was going about. Improvement went on uninterruptedly till the forearm was almost fully extended and the fingers fairly so, and both could be moved much more freely. Unfortunately, at this stage the patient had to go home on account of the family proposing to leave Scotland, so that it is doubtful if any account of the further progress of the case will be obtainable.

A CURIOSITY IN RAILWAY INJURIES.—The following case is noted on account of the very unusual character of the injury, considering the cause. The patient, a breaksman, act. 24, was run over by a railway truck, the result being a simple fracture of both thighs. A careful inquiry into details only made out the more remarkable character of his escape. It appears that for several minutes—the patient says ten—one of the wheels rested on his left thigh; and there can be little doubt of this, as he describes very graphically how the engineman came all the length of the train to his waggon, which was the last, and asked him if he would back it off his leg or pull it forward. He advised the former. It should be observed however, that the truck, which was empty, had left the rails, or such an escape would have been impossible. On being asked for his own explanation of the matter, he says it was likely because it was not a heavy waggon-maybe not more than three and a half tons!

FROM DR. CAMERON'S WARDS.

Reported by W. LIMONT, M.A., M.B., House Surgeon.

CASE I. LITHOTOMY AT AN ADVANCED AGE.—R. P., roadman, aged 74, was admitted on 15th March, 1879, with the common symptoms of stone in the bladder. Next day Dr. Cameron

passed the sound, and got a clear clink from the stone. On the following day, the stone could not be detected with Syme's staff, but next day it was again struck with the sound. He received a dose of castor oil and a good warm water enema. On 22nd March, he was put under chloroform, and Syme's staff was passed. Dr. Cameron then performed lateral lithotomy, and took out two stones, each about the size of a small walnut. They were composed of uric acid, with a phosphatic coating. The depth of the perineum was very great. A full-sized tube was tied into the bladder, and when the somewhat free bleeding had stopped, he was taken to a side room and put on a water bed. A morphia suppository was administered. The urine came away well through the tube. At bedtime, one grain of solid opium was given. March 23rd, had passed a good night; no pain; a little tepid water was syringed through the tube into the bladder; opiate at bedtime. March 24th, had passed a good night. Tube was removed and the wound syringed with tepid water. evening, he had a little pain and uneasiness in the belly, along with "wind." This was relieved by fomentation, and a dose of opium. March 25, had passed a good night. No pain. After a dose of castor oil the bowels were opened for the first time since the operation. March 26, patient was doing well. Wound was syringed with Condy's fluid and water. He was able to pass a little urine by the right passage. March 27, wound looked healthy, but had a good deal of mucus at the edges. It was syringed with Condy's fluid. March 28, to-day he passed urine by the urethra, and was allowed to lie on his right side. March 29th, he had passed a somewhat restless night, a little chilly at one time, and sweating at another. The wound looked healthy and was syringed. March 30th, he seemed quite well. The wound looked healthy. April 1st, had a slight hemorrhage at 7 a.m. Ice was applied and it stopped. April 2nd, had another slight hamorrhage at 7 a.m., after he had been sponged (against orders) by a nurse. April 3rd, he looked better. April 4th, early in the morning smart hamorrhage came on, and he became blanched and faint, and had a slight rigor. Dr. Cameron plugged the wound with strips of lint soaked in carbolized oil, applied iced water to it, and raised the foot of the bed. April 5th, patient seemed much better, and there had been no more bleeding. The urine flowed freely, but contained much mucus and some blood. was very ammoniacal. April 6th, the bladder was washed out with boracic lotion. April 16th, urine was coming by the urethra, and the wound was fast closing up. He was again

allowed to lie on his right side. April 25th, all the urine was coming by the urethra. May 12th, the wound is now healed, and he is to go home to Blantyre in a day or two.

Case II. PENETRATING WOUND OF THE ABDOMEN, WITH PROTRUSION OF THE VISCERA.—D. E., aged 20, was admitted on 13th April, having been stabbed in the belly, a little below and on the right side of the umbilicus. The wound was about two inches long, and the peritoneal cavity was opened. Enough bowel had protruded to form a mass the size of a child's head. This had been carefully cleansed and returned by Drs. Provan and Aitken. They had stitched the peritoneum with wire, and also the superficial wound. Dr. Cameron took out the superficial sutures, and dressed the wound by Lister's method. As he was suffering from severe shock, heat was applied to the body and hot coffee given. He was ordered a diet of iced milk, and one grain of opium every four hours. When the wound was dressed next day, the belly was slightly tympanitic and tender on pressure. The pulse and temperature had risen a little. The temperature, however, never rose above 101°4, and in four or five days became normal. The wound was dressed every day or two until 12th May, when he was discharged with it healed. The scar seemed to be adherent to the peritoneum.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1878-79.

MEETING IX.—21st February, 1879.

DR. CHARTERIS, DR. R. W. FORREST, and MR. WM. J. ADAM, read communications on Cases of Paroxysmal Hematinuria.

See pages 421 and 424.

Dr. Gairdner said that he had not personally witnessed any case of perfectly typical hæmatinuria, but he could recall a number of cases observed by him previous to the time this subject had been written upon, which appeared to point, more or less, in the direction of the probable pathology of hæmatinuria.

He had not been very long in connection with an hospital before he began to notice that in certain cases the blood colour appeared in the urine in much greater relative quantity than the blood corpuscles, and sometimes in greater relative quantity than the albumen, and vice versa. This want of correspondence between the colour and the other evidences of escape of blood from the vessels, had occasionally arrested his attention pretty early in his practice. As far as he could recall at present, he had early come to the opinion that the cases in which the blood colouring matter appeared, as it were, apart from the corpuscles, were probably cases of partial lesions of the kidney, in which the blood was in some way imprisoned and decomposed in connection with inflammatory or other local exudations in the organ, and afterwards, through the gradual disintegration of the exudation, voided in the urine, in the form of blood pigment without the corpuscles. Looking through the magnificent work of Rayer, to find a form of lesion corresponding with this view, and what he had himself observed in the early days of his pathological experience in Edinburgh, he would select Plate No. 5, "Néprite Rheumatismale" as answering to his conception. It was not difficult now-a-days for pathologists to recognize this lesion as nearly identical with that called by Virchow embolism of the kidney. The lesion was strictly circumscribed, and frequently showed a border of highly congested tissue, in which he (Dr. Gairdner) remembered to have noted extravasations of blood from the Malphigian tufts into the tubuli urinferi, forming the well known petechiae of the surface described by many good observers. In Rayer's 5th Plate there were several illustrations corresponding to different stages of this form of lesion, and showing that by the lapse of time the congestive appearances were removed, and finally that the greater part of the exudation occupying the renal tissue melted away and left cicatrices, with well marked atrophy of all the structures in the affected part of the organ. Having arrived at this view of these cases, Dr. Gairdner found several other facts pointing in the same direction. The late Dr. Laycock had read to the Medico-Chirurgical Society of Edinburgh, many years ago, a paper in which, without adverting at all to Rayer's views, he had associated a particular form of albuminuria with rheumatism. In Dr. Forrest's case, there was a history of hereditary The connection of rheumatism with embolism rheumatism. was sufficiently obvious. Great caution, however, was required in applying these facts to the theory of hæmatinuria. It would indeed be wrong to draw absolute conclusions from

loose analogies like these. All that he affirmed at present was that, within his own recollection, there had been cases in which the escape of blood, or blood colouring matter, into the urine, and sometimes albuminuria with tube casts, were associated with distinctly rheumatic relations. One case in his wards in the Royal Infirmary, commencing in rheumatism, was published by Dr. Finlayson in the Glasgow Medical Journal. In this case there was a succession of curious sequelæ, pointing distinctly, in his opinion, to embolisms successively in the arteries of the limbs, kidneys, brain, and probably elsewhere. A few years ago, one of his most valued hospital assistants in the Royal Infirmary, in looking out for material for demonstration before the class, of facts connected with the urine, did what it was not always safe to do-viz., took his own urine for the purpose, under the impression that it was normal. To his horror he found it albuminous, not having to his own knowledge had any symptoms of renal disease; and a few days afterwards he also found a large amount of blood in it. He came to him (Dr. Gairdner) under the conviction that he was the subject of Bright's disease. After carefully noting and considering the case, especially its off and on character, he came to the conclusion that it was one of those cases of partial lesions of the kidney. The patient had justified the diagnosis by living to the present day, and doing a good deal of excellent professional work. The presumption was that he was now in good health, though he had not specially made the inquiry. For a good while the case was doubtful, and he had been sent several vovages to escape the winter here. He might suggest that these cases of true hamatinuria might be further utilized for the scientific study of a point very directly bearing on medical practice. Advantage might be taken of their remarkable susceptibility to the action of cold, to ascertain in what way exactly cold acted—whether, as was popularly believed, by suppressing the transpiration of fluid through the skin, or in some other way. He would also like that some experiments should be made in such cases to show whether any curative or palliative results could be obtained from the use of Turkish or vapour baths. It might possibly be found that the skin could be educated to relieve the kidneys to a considerable extent, habitually, and that the susceptibility to morbid impressions from cold might be diminished after a time. The apparent failure to obtain a good result from pilocarpine in Dr. Charteris's case ought not to discourage him from this experiment.

Dr. Perry said that he had seen two cases of the affection. both females. One was in private practice, five years ago. The woman was suffering from sub-acute rheumatism. The case puzzled him very much, as he had not at that time seen a description of hæmatinuria. Subsequently, on reading Dr. Roberts' description of it, he recognized his case as coming under it. There was a large quantity of albumen present, but no blood corpuscles. The urine had the same characteristic appearances as in these cases. Styptics had no effect, but, after digitalis had been given, she got better, whether post hoc or propter hoc, he could not say. The disease returned again at the commencement of the present winter, following a chill after confinement, but only lasted about a week. The urine in that case, as well as the other, appeared to be in extra quantity. The other case occurred about a year ago, and continued off and on for six months; the patient leaving for abroad without being cured. The affection in this case was paroxysmal, the urine being clear in the morning and bloody in the evening. Every variety of treatment was tried without effect. Absolute rest appeared to be the only thing that did good. In that case there were no rheumatic symptoms. of that woman's children had been brought to him suffering from hæmatinuria.

Dr. M'Call Anderson said that he had seen one or two cases of the affection. In regard to the diagnosis, they must carefully distinguish between hæmatinuria and paroxysmal hæmaturia. As a symptom, the elevation of temperature was of importance. In one case which he had seen some years ago in St. George's Hospital, the temperature showed a great elevation. The etiology of the disease was of much interest. Probably the exciting cause was a transient congestion of the kidneys. Its occasional association with the symptoms of ague was to be considered. In a few cases the exciting cause might be intermittent fever. Many crystals of oxalate of lime were often seen in the urine. These, it was well known, were very irritating, and might give rise to congestion of the kidneys. There was also no doubt a predisposing cause. There appeared to be something of a neurotic element in the affection. The symptoms of uticaria produced artificially in one of the cases shown to-night pointed in that direction. Whether the rheumatic diathesis had anything to do with the neurosis might be a question. In regard to treatment, large doses of tonics, especially quinine, appeared to do best. Full doses of salicine or salicilate of soda might be tried.

Dr. Joseph Couts said that the pathological aspects of these

cases interested him most. The first thing that arrested attention was the enormous destruction of blood corpuscles which must occur in order that such large quantities of blood colouring matter might pass into the urine. Where did that destruction take place? It had been taken for granted that it occurred in the kidney. He could not conceive that such a large and sudden destruction could take place in that organ. There were various reasons for coming to this conclusion. Congestion of the kidney might produce leakage of blood through the Malpighian tufts, but he could not conceive that blood colouring matter could so escape. Certain circumstances indicated that the blood corpuscles were destroyed before they reached the kidney. Hæmatinuria might be produced by destruction of the blood corpuscles in the blood. It might be produced artificially. Thus, it has been stated that the introduction of blood by transfusion produced it, if the blood used be that of a different species of animal. If the blood of a calf were introduced into a dog, the blood corpuscles of the calf did not survive, but became dissolved in the dog, and, as the colouring matter was washed out by the kidneys, hæmatinuria was the result. Again, if the blood, even of the same species of animal, were frozen and then thawed before being used in transfusion, hæmatinuria also resulted, as the corpuscles lost their vitality by freezing. Further, hæmatinuria was not unknown in certain kinds of blood diseases, such as pytemia and typhus fever. In these diseases the blood was seriously altered. In typhus fever the corpuscles were in a kind of soft, glutinous state. Again, in some cases of acute ague there was a great destruction of the blood corpuscles in the spleen. The blood colouring matter got into the blood in a solid state. The possible connection between this disease and ague had been suggested that evening. These circumstances led him to think that the destruction of blood corpuscles took place in the blood, or, at least, in some other organ than the kidney. It was evident that the disease was associated with an alteration of the constitution of the blood. It might perhaps be said that, if the destruction went on in the blood and not in the kidney, we should not expect that much albumen would be discharged with the urine. But, on the one hand, he would suggest that, as the reaction of dissolved hemoglobin was very much like that of albumen, the former might be taken for the latter. On boiling a solution containing hamoglobin a precipitate is got; and it is very possible that, in the cases shown, part of the precipitate obtained by boiling is from hamoglobin, which was

shown to be present by spectroscopic examination. On the other hand, it has been shown by the experiments already referred to, that when artificial hæmatinuria has been induced in animals, the blood colouring matter, in its evacuation by the kidneys, produces irritation there. This might account for the tube casts and the albumen noted in these cases.

Dr. M'Vail said that, in typhus, hæmatinuria was doubtless liable to occur from the destruction of the blood corpuscles. But, in the cases shown that evening, the destruction was evidently brought about in response to a temporary nervous influence, and that influence ceasing to operate it passed away. No nervous influence could directly affect the general circulating fluid. It appeared to him that it was, therefore, probable that the disintegrating process was localised in some organ or tissue, and quite possibly in the kidney. He was of opinion that albuminuria did not depend always entirely on the causes usually assigned to it, but that it frequently depended upon the action of the cells of the uriniferous tubes directly secreting albumen, in the same manner as the cells of the pancreas secreted a fluid containing albumen. He did not consider that the albumen always, in every case, found its way into the uriniferous tubes merely from disordered conditions of blood pressure in the renal capillaries, or from the tubes stripped of their epithelium by desquamation allowing an easier passage to blood constituents, among these being albumen. In a similar way the hæmoglobin and hæmatin found in hæmatinuria might be directly secreted by the renal cells. Certainly this did not preclude the idea that the hæmatin might be liberated, in certain cases, from the red blood corpuscles by other organs or tissues, such as the spleen.

Dr. Thomson was of opinion that the theory of Dr. Coats more accorded with the facts. The very suddenness of the destruction of blood corpuscles appeared to show that it took place in the blood throughout the body, rather than in

the kidney.

Dr. Morton pointed out that of all diseases scorbutus appeared to present a degeneration of the blood most nearly analogous to that which took place in hæmatinuria. Scurvy had long been believed to affect the blood corpuscles in relation to the colouring matter. The colouring matter appeared on the surface and in the urine. In the late Arctic Expedition it was, he believed, noted that there was a great amount of hæmatinuria on exposure to cold. Exposure in an open boat in the torrid regions, in rainy seasons, was said to produce the same condition of urine. In Mauritius fever it was a frequent

symptom. In regard to his own experience he could recollect cases which he now thought might be hæmatinuria. It had occurred to him, in relation to what he said about the possible connection, or rather analogy, to scorbutus, that citric acid might be tried as a remedy, probably combined with iron. He had been in the habit of prescribing this combination.

Dr. Whittuker said that from the appearance of oxalates, which they knew to be formed in the tubules of the kidney, and also the mucous streaks from the tubes of the kidney, in the preparations under the microscope, he was led to think that there had been very considerable excitement in that organ. This pointed to the kidney being the seat of the lesion.

Dr. Charteris, in reply, said he had no theory of the pathology. Dr. Gairdner's suggestion about the Turkish bath was

one which he intended to follow out.

Dr. Forrest said that he gave in this case salicin, very freely, without result. While under the rheumatic attack he had also salicilic acid. Quinine and iron had also been tried without any improvement. Iodide of potassium and arsenic had been for some time tried.

MEDICAL ITEMS.

UNDER THE DIRECTION OF

ALEX. NAPIER, M.D.

Tetanus.—In Brain, for October, 1878, Dr. D. W. Yandell gives the results of a study of 415 cases of tetanus, 385 of which were recorded in medical journals, home and foreign, the details of the remaining 30 being obtained privately. As illustrating one of the many sources of fallacy in reasoning from statistics, it is pointed out that of the 385 cases above mentioned, 233 recovered and 182 died, while of the 30 which were privately communicated, only 3 recovered; 90 per cent died. The inference is that practitioners all over the world are much more ready to publish their successful cases than their failures. Dr. Y.'s conclusions are, nevertheless, of great general importance. They are as follows:—

1. Traumatic tetanus is most fatal during the first decade of life. Only 7 per cent of all the cases occurred within this

period, and of these 62 per cent died.

2. It usually supervenes between four and nine days after the injury.

3. The largest number of recoveries is found in cases in which the disease appeared after the lapse of nine days from the injury.

4. When tetanus continues fourteen days, recovery is the rule, and death the exception, apparently independent of

treatment.

5. Tetanus arising during the puerperal state is the most fatal form of the disease.

6. Chloroform has, up to this time, yielded the largest per-

centage of cures in acute tetanus.

7. The true test of a remedy for tetanus is its influence on the history of the disease. (a) Does it cure cases in which the disease occurred prior to the ninth day after the injury? (b) Does it fail in cases whose duration exceeds fourteen days.

8. Tried by these tests, no agent has yet established its

claims as a true remedy for tetanus.

Hypodermic Injection of Morphia in Dyspnœa.— M. Latil confirms the remark that "Morphia aids respiration." His results are based, on the one hand, on the sensations of the patients, and on the other on the state of the pulse and of the respiration before and after the injection. The doses employed varied from 3 milligrammes to 2 centigrammes; but in pretty severe cases of dyspnæa 3 milligrammes generally sufficed to reduce the number of respirations by 4 or 6 per minute. The time necessary to obtain the complete effect varied from 10 to 30 minutes; generally there was a slight increase in the respirations immediately after the injection. Then in about five minutes a diminution in frequency, with more ample and regular respirations, while the complete result was ordinarily obtained in 15 minutes. In some cases, chiefly nervous females, the period of excitement was prolonged. In a total of 90 cases his results were:

In 5 cases, a diminution of 18 or 20 respirations per minute.

,, 8 ,, 16 ,, 18 ,, 19 ,, 16 ,, 18 ,, 19 ,, 10 ,, 12 ,, 19 ,, 40 ,, 6 ,, 8 ,,

In 10 cases, the number of respirations was unaltered, and in 11 remaining, there was an increase of 2 or 4 respirations. The pulse was almost uniformly reduced by 6 or 8 beats per minute. In cases where there was no symptom connected with the respiratory organs, the injection of morphia had no effect on the respiration. The treatment was found successful whether the dyspnæa was due to pulmonary phthisis, to a nervous condition, or to mechanical causes, such as pleuritic

effusion or enlargement of the liver; and very useful in cases of cardiac dysphea, M. Huchard being of opinion that "Morphia is to aortic affections what digitalis is to mitral." In emphysema the respirations, though not diminished in frequency, were rendered much more easy. Hence, he concludes that morphia addresses itself rather to the phenomenon of dysphea itself than to the causes which produce it.—La France Médicale. No. 11. 1879.—G. S. M.

Treatment of Psoriasis with Pyrogallic Acid. -Dr. Besiner and M. Arragon, of Paris, have employed pyrogallic acid in the treatment of psoriasis, with good results. The acid is mixed with simple ointment, in proportions varying from 5 to 25 per cent, and this ointment is rubbed in once or twice daily on the diseased patches, either just as they are, or after they have been well washed with black soap. They find that it is not inferior to any of the topical remedies in use for psoriasis; that, while its action is relatively somewhat slow. it is not offensive, and when applied of an ordinary strength, does not produce ervthema to such an extent as to interrupt the cure of the affection, having succeeded in a case in which chrysophanic acid had to be discontinued owing to the irritation it caused. It produces a more or less dark colour of the skin, which passes off in a few days, and it seems also to deepen the shade of the hair. If, however, the patient performs the inunction himself, the nails and the palms of the hands are apt to become deeply coloured. It has no smell. Its price is somewhat less than that of chrysophanic acid.— La France Médicale. No. 21. 1879.—G. S. M.

Subcutaneous Injection of Ether.—A case is recorded by M. Letulle, of repeated uterine hamorrhage, following on abortion at the third month, in which life was apparently preserved by the subcutaneous injection of ether. Ergot of rye and vaginal pluggings had proved of only temporary service, and on the occasion of the eighth hamorrhage (thirty-two days after the first), the patient was so exhausted and anamic that Prof. Peter suggested transfusion of blood. On the advice of M. Verneuil, however, five subcutaneous injections of sulphuric ether of five drops each were made, and at the same time two or three syringefuls of ergotine were injected. The result was instantaneous and good. Three days afterwards hemorrhage again took place, and the patient seemed in articulo mortis. The vagina was plugged, and two syringefuls of ergotine and two of ether (1 gr. 50 centigs.) were injected in the space of ten minutes. Scarcely had the second

injection of ether been made, when she recovered sufficiently to be able to speak, complaining of acute pains in the epigastrium. During the day two grammes of ether were injected. From that time recovery was continuous; but it was one day observed that there was complete analgesia and anæsthesia of the skin and mucous membranes, and that a certain degree of dyschromatopsia was present. The ether was held to have acted as an energetic stimulant, and to have rendered the absorption of the ergotine more rapid.—La France Médicale. No. 14. 1879.—G. S. M.

Poisoning by an Atropine Collyrium.—Dr. Lutand laid the following case before the Société de Médicine de Paris. He was called to a pharmacien who was in a state of delirious agitation, apparently in great pain, but unable to articulate or reply to any questions. His eyes were promiment and bloodshot, and mydriasis existed to such an extent that the iris ceased entirely to act in the presence of light, and blindness was evidently complete. The heart beat tumultuously, and the breathing was short and stertorous; but neither paralysis, tremor, nor convulsions were present. The pulse was small and irregular, and the skin cold and clammy. The diagnosis was entirely obscure until it was learned that the patient had suddenly increased the strength of the sulphate of atropine, in a collyrium he had been using, from five to ten centigrammes to ten grammes of water, and had employed this every hour. After the hypodermic injection of three centigrammes of morphia, delirium was replaced by an alarming stupor, followed by somnolence, which was easily combated by stimulants and revulsives. Eight hours after the commencement of the first alarming symptoms he was able to reply vaguely to questions. After sleeping five hours longer, he awoke in a state of incredible calmness, asking what it was that was going on around him, and having no recollection whatever of what had transpired. The patient was able to resume his occupation in a few days; and M. Lutand describes this rapid disappearance of the accidents produced as one of the characteristics of poisoning by atropia. He concludes as follows:—1. Instillations and collyria containing atropia may penetrate into the lachrymal puncta, pass into the pharynx, and induce serious symptoms of poisoning. 2. These symptoms are as remarkable for their intensity as for the rapidity with which they disappear. 3. Collyria, with large doses of atropia, should always be applied by the practitioner himself, who should make some

pressure at the inner canthus in order to prevent the liquid passing into the puncta.—Union Med. and Medical Times.—H.E.C.

Sulphuric Ether in Sciatica.—Dr. Connegys states, in the Cincinnati Lancet, that in his hands, and in those of other practitioners, the hypodermic injection of 30 minims of sulphuric ether, night and morning, a little posterior to the great trochanter, has effected a cure in sciatica. Dr. Starr, of Philadelphia Episcopal Hospital, injects one eightieth of a grain of atropia into the tissues directly over the track of the painful nerve with manifest advantage.—New York Medical Record.—H. E. C.

Antiseptic Puncture of Joints.—Dr. F. Rinne recommends this procedure in many diseases of the joints. His method of operating is as follows. The surface of the knee-joint (the other joints rarely requiring treatment of this kind) having been carefully cleansed, a strong trocar is thrust into its interior under the antiseptic spray, and generally without the employment of chloroform. The articular cavity is then washed out thoroughly with a 3-5 per cent solution of carbolic acid, until the fluid which returns is perfectly clear, the limb being meanwhile flexed and extended, and the parts rubbed and kneaded to ensure the complete evacuation of all abnormal contents. The small wound is dressed strictly antiseptically, and the limb kept fixed in a splint for 5 or 6 days. Movements are then commenced, and in about 14 days the cure is usually complete. Dr. Rinne finds (basing his report on considerable experience of the method of treatment in one of the hospitals of Berlin) that antiseptic puncture is best adapted for the following classes of cases:-

1. Those instances of acute synoritis in which the exudation is so abundant as to threaten to burst through the capsule of the joint, or in which there is much pain.

2. Subacute and chronic serous effusions into the joint.

3. Purulent-synovial effusions.

4. Acute harmarthrosis, the result of injury.

5. Certain cases of rheumatic arthritis, with copious effusion.

6. Parenchymatous purulent arthromeningitis, when the effusion appears about to perforate the capsule: in these cases drainage tubes generally prove of service.

7. The slighter forms of jungous inflammation of joints; here the puncture is employed merely as an adjuvant to other methods of treatment.—Deutsche Med. Wochenschrift. 26 April, 1879.

Drug Smoking.—Dr. R. E. Thompson has a very suggestive paper in the Practitioner (April, 1879), entitled "The Therapeutical value of Drug Smoking." Starting with the proposition that "the less the tissue intervening between the channel of introduction and the blood-vessels the more intense will be the effect, and consequently the smaller will be the requisite dose" of any drug, he observes that, owing to the special arrangement of the vessels in the lungs, it may fairly be conjectured that absorption through the air passages should more closely approximate to the immediate introduction into the blood-vessels, in rate of absorption and intensity of effect, than any of the other modes of administration. Of the various ways in which medicines may be conveyed into the lungs, -inhalation by steam or atomised vapours, fumigation with powders, and smoking, the last mentioned is the best. In his experiments Dr. T. used cigarettes made according to the following formula:-

The paper is impregnated with the other ingredients, and then dried; the anise and tincture of tobacco (the latter made with 2½ oz. of the leaves to a pint of spirit) disguise the odour of the burning paper, while the nitre causes the cigarette to burn continuously. A solution of the drug to be experimented upon having been prepared, the paper is floated through it, dried, and cut into a certain size, so that the dose given is accurately measured. The paper is then rolled as tightly as possible into the form of a cigarette, and smoked in the ordinary way. If the full effect of the dose be desired, the patient should be instructed to expand the chest with a full inspiration, and to retain the smoke in the lungs. It was found that, used in the ordinary fashion, i.e., rejecting a considerable part of the smoke, a cigarette containing of a grain of extract of opium produced decided dizziness in the course of a few minutes, when smoked by healthy men; as at least half of the drug is in this way lost, it seems a fair inference that 113 of a grain of extract of opium can exercise a marked influence on the system when introduced through the lungs. Several cases of harassing night cough (due to phthisis, asthma, mitral obstruction, &c.) are then given, in which the opium cigarettes had a very good effect, the cough being relieved and calm refreshing sleep obtained. In one case $\frac{1}{200}$ of a grain was sufficient to

procure rest; this is "rather startling, and far surpasses the results obtained from subcutaneous injection." The smoking of opium is especially adapted for cases of night cough, of laryngeal ulceration in which deglutition is painful, and of asthma.

Benzoate of Soda in Puerperal Fever.—Dr. Petersen here puts on record the case of a young woman, 25 years of age, a primipara, who, twelve days after confinement, was seized with puerperal fever. The symptoms were those of circumscribed parametritis, limited chiefly to the right side and the fundus uteri; there were also great pain and meteorism, diarrhea, a pulse of 140-150, and a temperature of 104° F. Salicylate of soda reduced the temperature, but its administration was followed by a threatening of collapse, extreme dyspnæa, and an increase of the meteorism. Benzoate of soda was then ordered—a tablespoonful every hour of a solution containing 10 (subsequently increased to 15) of the salt to 20 of water. This was followed by marked improvement; the pulse gradually fell to 104 and the temperature to 101°3 F., the dyspnæa disappeared, the meteorism diminished, and the patient felt in every way more comfortable. subsequent progress of the case was all that could be desired. Dr. P. does not mean to uphold benzoate of soda as a specific for puerperal fever, but he strongly recommends it for further trial.—Centralblatt der Med. Wissensch. 8th March, 1879.

Defibrinated Blood in Rectal Alimentation.—The following are the conclusions adopted by a committee appointed to investigate this subject by the Therapeutical Society of New York.

1. Defibrinated blood is admirably adapted for use for rectal alimentation. 2. In doses of 2 to 6 ounces it is usually retained without any inconvenience, and is frequently so completely absorbed that very little trace of it can be discovered in the dejections. 3. Administered in this way, once or twice a day, it produces, in about one-third of the cases, for the first few days, more or less constipation of the bowels. 4. In a small proportion of cases the constipation persists, and even becomes more decided the longer the enemata are continued. 5. In a very small percentage of cases irritability of the bowels attends its protracted use. 6. It is a valuable aid to the stomach whenever the latter is inadequate to a complete nutrition of the system. 7. Its use is indicated in all cases not involving the large intestine, and requiring a tonic influence which cannot readily be

obtained by remedies employed in the usual way. 8. In favourable cases, it is capable of giving an impulse to nutrition which is rarely if ever obtained from the employment of other remedies. 9. Its use is wholly unattended by danger.—New York Med. Journal. April, 1879.

Pilocarpine as a Remedy for Baldness.—It is announced by Dr. G. Schmitz (Berl. Klin. Wochenschrift, 27th January, 1879), that pilocarpine possesses, in a remarkable degree, the power of reproducing the hair on a bald surface, in certain instances at least. The cases on which this statement is based are as follows:-A man, 60 years of age, completely bald (with the exception of a few white hairs on the occiput), was operated upon for double cataract. After the operation there remained, in one of the pupils, a fragment of membrane, to cause the absorption of which the author administered, within a period of fourteen days, three subcutaneous injections of the muriate of pilocarpine. The membrane disappeared; but this was not all. At the same time the head became covered with a thick crop of hair, which grew so rapidly that, at the end of four months, no trace of baldness remained. The new hair was partly white and partly black. The second patient, aged 34, suffering from separation of the retina, presented on the crown of his head a perfectly bare patch, as large as an ordinary playing card. Two injections of the same substance not only cured the ocular affection but produced an abundant growth of hair on the bald part of the head. Unfortunately, Dr. S. gives no information as to the nature or causes of the baldness in his two patients.—L'Année Médicale. March, 1879.

Boracic Acid in Skin Diseases.—Professor Neumann, who has for some years past made great use of borax ointment, has recently endeavoured to bring boracic acid into use in the treatment of diseases of the skin. He prescribes an aqueous solution in parasitic diseases; an alcoholic solution in the itching consequent upon urticaria and pruritus; the ointment in all forms of eczema. Combined treatment with soap wash and tar is necessary in infiltrated forms of eczema. Aqueous and alcoholic solutions are applied by means of a sponge or brush, or the remedy is dusted over as a powder. In pityriasis and herpes tonsurans solutions of 10-20: 300 with the addition of 2:5-3:0 oil of cloves; in eczema a salve of 10: 50. An infusion of cloves may be added to the alcoholic extract.—

(Der Practische Arzt., July, 1878.) The Practitioner, May, 1879.

Books, Pamphlets, &c., Received.

Typhoid Fever: its Causes and Extent in Melbourne, based on the report of an Inquiry made by special request of the Central Board of Health, and presented to both Houses of Parliament by His Excellency's command. By William Thomson, F.R.C.S. Third edition, revised. Melbourne: George Robertson. 1878.

Remarks on a Review of the Report on the Cause and Extent of Typhoid Fever in Melbourne. By William Thomson, F.R.C.S.

Melbourne: George Robertson. 1879.

Atlas of Histology. By E. Klein, M.D., F.R.S., and E. Noble Smith, L.R.C.P. Parts I, II, III. London: Smith, Elder & Co. 1879.

Etude Historique et Clinique, sur la trépanation du Crane. La Trépanation guidée par les Localisations cérébrales. Par le Dr. Just Lucas-Championnière. 14 figures dans le texte. Paris: V. A. Delahaye & Co. 1878.

Physiological Therapeutics: a new theory. By Thomas W. Poole,

M.D., Toronto. 1879.

Notes for Students. Pathological Anatomy: a Guide to the postmortem room. Part I. By Robert J. Lee, M.A., M.D. London: J. Richards. 1879.

Lectures on Syphilis of the Larynx, Lesions of the Secondary and Intermediate Stages. By W. MacNeill Whistler, M.D. Lon-

don: J. & A. Churchill. 1879.

Essays on the Treatment of Deformities of the Body. By Fred. R. Fisher, F.R.C.S.. No. 1. The Treatment of Pott's Disease, or Angular Deformity of the Spine. London: J. & A. Churchill. 1879.

Lectures on Diseases of Women. By Charles West. Fourth edition, revised and in part re-written by the Author, with numerous additions, by J. Matthews Duncan, M.D. London: J. & A. Churchill. 1879.

The Notation Case-Book. Designed by Henry Veale, M.D. London:

Smith, Elder & Co. 1879.

Aperçu Clinique sur les Eaux d'Aix et de Marlioz—Savoie. Par le Dr. L. Brachet. Paris : J. B. Baillière et fils. 1875.

A Manual of Midwifery, for Midwives. By Fancourt Barnes, M.D. With illustrations. London: Smith, Elder & Co. 1879.

Clinical Remarks on Gleet: its causes and treatment. By J. C. Ogilvie Will, M.D. London: J. & A. Churchill. 1879.

Clinical Lectures on Diseases of the Urinary Organs. By Sir Henry Thompson. Fifth edition. London: J. & A. Churchill. 1879.

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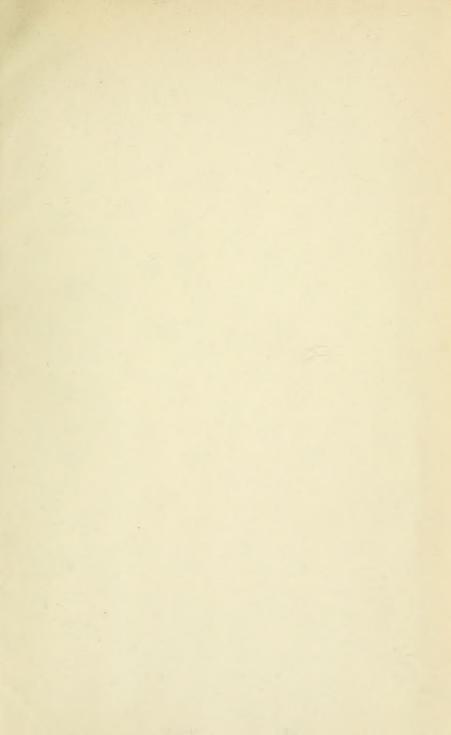
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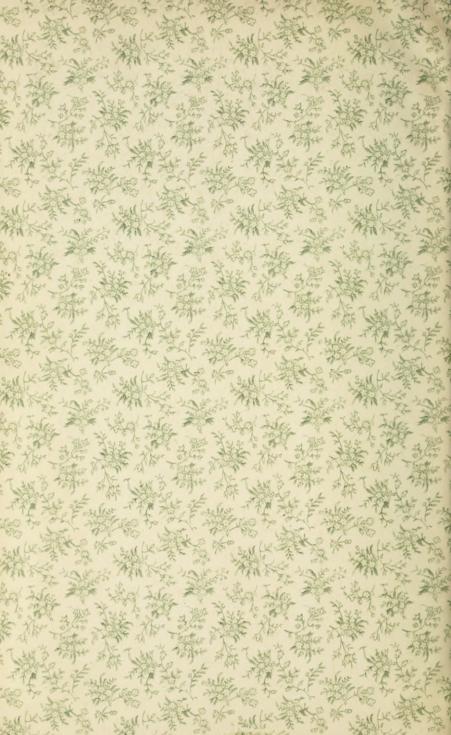
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